Heimdal, Monica

From: Sent:

John Brunini [jbrunini@brunini.com] Monday, June 24, 2013 2:26 PM

To:

Crooke, Patsy J NWO

Cc:

kb@geomap.tv; gmeyer@carlsonmccain.com; Todd Hartleben; Cimarosti, Daniel E NWO

Subject:

Information for Proposed Meeting on Thursday, June 27, 2013

Attachments:

Williston Village RV Resort Wetland Delineation Report pdf; Letter to Patsy Crooke pdf;

Wetland Mitigation Plan.pdf

Ms. Crooke,

Our law firm represents BIP, 40. Attached to this email, please find correspondence from our firm providing background information regarding possible impacts to wetlands in the Williston, ND area. These possible wetland impacts will be the subject of a meeting on Thursday between your office and representatives from Carlson McCain and BIP 40. Also attached and for your consideration is a proposed mitigation plan to address these possible impacts to wetlands. I will not be attending the meeting later this week but am available to discuss the matter if you have any questions regarding it. I will also be mailing a hardcopy of these documents to you in today's mail.

Thanks, John Brunini

John A. Brunini

E: jbrunini@brunini.com

P: 601-973-8712 F: 601-960-6902



BRUNINI, GRANTHAM, GROWER & HEWES, PLLC The Pinnacle Building 190 East Capitol St, Suite 100, Jackson, MS 39201 Post Office Drawer 119, Jackson, MS 39205

www.brunini.com Bio / V-Card

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June 24, 2013

Patsy Crooke **Project Manager** United States Army Corps of Engineers North Dakota Regional Office 1513 South 12th Street Bismarck, ND 58504

Via Email and U.S. Mail

Re:

BIP 40 LLC

Williston Village RV Resort Section 24, T155N, R101W Williston, Williams County, ND

Dear Ms. Crooke:

Our law firm represents BIP 40, LLC. We write to notify you that BIP recently learned of possible impacts to jurisdictional wetlands during its development of an RV Park near Williston in Williams County, North Dakota. Specifically, BIP's construction of the Williston Village RV Resort may have resulted in unintentional impacts of up to approximately 4.5 acres of a former oxbow/meander channel of Camp Creek in Williams County, North Dakota.

In October, 2011, in order to develop an RV Park to meet growing housing demands, BIP began work to acquire a parcel consisting of approximately 117 acres. In February, 2012, it retained a North Dakota civil engineering firm, SBL Associates, Inc., ("SBL"), to prepare a grading and improvement plan for the property. As part of this planning process, and as explained in more detail below, BIP relied on SBL to advise it regarding the presence of jurisdictional wetlands on the project site. In April 2012, SBL completed the improvement plans, and the plans were submitted to the City of Williston and the North Dakota Department of Health. On June 15, 2012, the City of Williston issued a grading permit. On July 3, 2012, the North Dakota Department of Health, Environmental Health Section, issued an NPDES permit.

Grading of the property commenced in July, 2012. While grading was in process, Pat Beebe of SBL informed BIP that the wet area in the northeast portion of the property likely contained jurisdictional wetlands and that this area was the only area on the property containing jurisdictional wetlands. During the grading process, and based on Beebe's statements regarding the presence of a jurisdictional wetland there, BIP prohibited contractors from placing any fill

Patsy Crooke June 24, 2013 Page 2

material in the northeast portion of the property. Additional grading and placement of fill material occurred on other portions of the property, including such activities in the northwest portion of the property, which contained no surface water. All mass grading was completed sometime in September-October 2012. On March 13, 2013, SBL notified BIP that part of the northwest portion of the property – which had already been impacted by grading activities - was possibly a wetland.

After being informed of the existence of possible jurisdictional wetlands in the northwest portion of the property, BIP engaged Carlson McCain, Inc. to conduct a site investigation and wetland delineation. Due to prolonged winter weather this spring, Carlson McCain was unable to conduct field work on this project until May, 2013. Carlson McCain produced a wetland delineation report on May 17, 2013 which indicates that the BIP development may have impacted up to 4.5 acres of jurisdictional wetlands.

Upon learning of these possible wetland impacts, BIP instructed Carlson McCain to request a meeting with the Corps of Engineers to evaluate this matter and discuss potential solutions. To reiterate, BIP never intended to conduct development activities that would result in impacts to jurisdictional wetlands. BIP instead relied upon the expertise of SBL to advise it regarding the existence of jurisdictional wetlands in the project area. Unfortunately, BIP's reliance on that expertise appears to have been misplaced. Nevertheless, BIP looks forward to working with the Corps to resolve any impacts to wetlands that are determined to have occurred. Along those lines, Carlson McCain has developed a proposed conceptual wetland mitigation plan that we believe appropriately offsets the impacts to wetlands that may have occurred during the development project. This plan involves the expansion of existing on-site, in kind wetlands that would serve to mitigate for and offset the loss of functions and values provided by impacted wetlands.

Enclosed for your review prior to the proposed June 27, 2013 meeting is Carlson McCain's wetland delineation report dated May 17, 2013 and a proposed conceptual mitigation plan also prepared by Carlson McCain, Inc. BIP looks forward to working with you to resolve these issues as expeditiously as possible.

Sincerely,

Brunini_Grantham, Grower & Hewes, PLLC

John A. Brunini

Cc: BIP 40, LLC

Carlson McCain, Inc.





June 20, 2013

Mr. John Brunini Brunini Firm The Pinnacle Building 190 East Capitol Street, Suite 100 Jackson, MS 39201

Dear Mr. Bunini,

Carlson McCain, Inc. is pleased to submit the Wetland Mitigation Plan for the Williston Village RV Resort for your review.

Please call me at 701-595-7004 if you have any questions or need additional information.

Sincerely,

Greg Meyer, MS

Ecologist

WETLAND MITIGATION PLAN

Williston Village RV Resort Section 24, T155N, R101W Williams County, North Dakota Project #4554

Prepared for:

Mr. John Brunini Brunini Firm The Pinnacle Building 190 East Capitol Street, Suite 100 Jackson, MS 39201

June 20, 2013



600 S. 2nd Street, Suite 105 Bismarck, ND 58504 Tel 701-255-1475 Fax 701-255-1477 www.carlsonmccain.com

ENVIRONMENTAL • ENGINEERING • LAND SURVEYING

EXECUTIVE SUMMARY

Construction of the Williston Village RV Resort (RV Resort) has impacted a wetland that appears to be connected to Camp Creek. A wetland delineation conducted by Carlson McCain, Inc. determined that 4.5 wetland acres were impacted by construction activities (Carlson McCain, 2013). This Wetland Mitigation Plan outlines procedures that will be taken to mitigate the wetland impact(s).

The RV Resort proposes to mitigate the impacted wetland area by creating/expanding wetlands of similar class and function. The on-site and in-kind mitigation wetlands will provide similar habitat and society functions at both local and landscape levels as the impacted wetland area. At the local level they will provide enhanced nesting, feeding, and brood-rearing habitat. At the landscape level they will create additional floodwater retention and improve water quality as areas along Camp Creek become developed. The mitigation site is located in the NE¼ of Section 24, T155N, R101W. The amount of wetland impacts and proposed compensatory mitigation are summarized in Table 1.

Table 1. Summary of Project Wetland Impacts and Compensatory Mitigation

Project Location	Williams County	Section 24, T155N, R101W	
Project Wetlands	PEMA/PEMC (Cowardin 1979)		
Permanent Wetland Impact	4.5 Acres		
Mitigation Location	Williams County	Section 24, T155N, R101W	
Area of Mitigation Site	Approximately 4.6 acres		
Area and Type of Mitigation	Approximately 4.6 acres of wetland expansion/creation		
Total Mitigation Credits	Approximately 4.6 acres		
Years of Monitoring	5 years		

The proposed mitigation wetland characteristics will be monitored for up to five years, or until the mitigation wetlands have met their performance standards for two consecutive years and receive the consent of the U.S. Army Corps of Engineers (USACE) to end monitoring. A monitoring plan is also included in this document.

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Appendix B Williston Village RV Resort Wetland Delineation Report

Appendix C Mitigation Wetlands Design

1.0 INTRODUCTION

Construction of the Williston Village RV Resort impacted approximately 4.5 wetland acres by filling a former oxbow/meander channel of Camp Creek (Appendix A). Camp Creek flows east through the northern portion of the RV Resort property toward the Little Muddy River. Fill was placed into the former oxbow/meander channel during construction activities. Construction was halted when the area was identified as a possible wetland. A wetland delineation that evaluated historic aerial photos and current field conditions was conducted to determine the area of impact (Appendix B). This report identifies the project impacts to the wetland and proposes an option to mitigate those impacts.

The wetland is located on the RV Resort property on the north edge of Williston, North Dakota, in the NE¼ of Section 24, T155N, R101W (Appendix A).

Table 2, Impacted Wetland Area

Wetland	NWI	Acres*	Wetland Impact Acres
Wetland 1	PEMA/PEMC	4.5	4.5
		Total	4.5

^{*}Acreage estimated from wetland delineation contained in Wetland Delineation Report (Carlson McCain, 2013).

The RV Resort will oversee construction, management, and monitoring of the mitigation wetlands.

2.0 WETLAND IMPACT ASSESSMENT

The impacted wetland is located on RV Resort property and is classified as Palustrine Emergent Temporarily Flooded (PEMA) and Palustrine Emergent Seasonally Flooded (PEMC). The wetland area was a former oxbow/meander channel of Camp Creek and is located in the Little Muddy River watershed.

2.1 Mitigation Strategy

The RV Resort plans to create/expand existing wetland areas along Camp Creek by excavating adjacent uplands areas. The excavation will create shallow depressions that will be hydrologically connected with Camp Creek and are designed to become inundated and retain flows of the creek. Besides hydrology, Camp Creek and adjacent wetlands will provide a large seed bank to ensure the development of a functional hydrophytic vegetation community.

2.2 Mitigation Credit Ratios

Mitigation credit ratios describe the ratio of compensation credits given to certain actions of mitigation for affected acres. For example, a 1:1 ratio means that one mitigation acre is required to compensate for one affected acre. A 2:1 ratio means that two mitigation acres are required to compensate for one affected acre. Mitigation credit ratios established for North Dakota are shown in Table 3 (USACE 2009).

Table 3. Wetland Mitigation Credit Ratios

Mitigation Action	Ratio
Fully drained wetland restoration	1:1 acres
Wetland creation	2:1 acres
Wetland expansion	1:1 acres*

^{*}Credit ratio predicted due to expansion of existing wetlands and Camp Creek providing adequate hydrology and a hydrophytic vegetation seed bank.

3.0 MITIGATION STRATEGY AND SITE

3.1 Mitigation Site Location

The mitigation area is located in the northeast corner of the RV Resort, approximately 235 feet from the impacted wetland area. The mitigation area will be adjacent to Camp Creek that flows into the Little Muddy River, which in turn flows into Lake Sakakawea.

The mitigation area is located within the Northern Glaciated Plains - Glaciated Dark Brown Prairie sub-ecoregion of North Dakota (Bryce et al. 1996). The Site's landscape consists of level to gently rolling plains topography with established drainage systems.

3.2 Mitigation Site Historic and Current Land Use

The mitigation area consists of an area of perennial grassland that has been used for livestock grazing and also appears to have been formerly cultivated. The vegetation on the Site primarily consists of crested wheatgrass (Agropyron cristatum) and western wheatgrass (Pascopyrum smithii).

3.3 Mitigation Wetlands

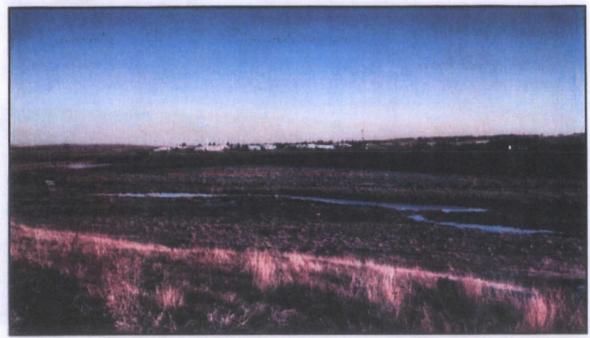
Two sites adjacent to Camp Creek and its associated wetlands have been selected for mitigation. Both sites consist of upland soils and vegetation but are immediately adjacent to Camp Creek and its associated wetlands. Both sites would be periodically inundated by high flows.

3.4 Wildlife Habitat and Use

The mitigation sites currently provide foraging and nesting habitat for grassland bird species. Creation/expansion of the mitigation wetlands will enhance habitat for species that utilize shallow wetlands for foraging and nesting. Wading shorebirds, waterfowl, amphibians, reptiles, fish species and other wildlife will all benefit from the mitigation wetlands. The Site is located within the Central Flyway migratory route and will be utilized by numerous waterfowl, waterbird, and passerine species.



Photograph 1 – Mitigation Site 1
Photograph taken facing south toward the RV Resort. Mitigation Site 1 is an upland area adjacent to Camp Creek. Crested wheatgrass is the primary vegetation on the site. Excavation of the site would allow inundation by high flows back-flooding into it from Camp Creek. The high flows would also bring hydrophytic vegetation seeds into the mitigation wetland. The blue line indicates the approximate location and shape of Mitigation Site 1.



Photograph 2 - Mitigation Site 2

Photograph taken facing south toward the east side of the RV Resort. The mitigation site is a low elevation upland area adjacent to the associated wetlands of Camp Creek. Crested wheatgrass and western wheatgrass are present on the site. Excavation of the site would allow inundation and saturation from the adjacent wetlands. The adjacent wetlands would also be a source of hydrophytic vegetation seeds. The blue line indicates the approximate location and shape of Mitigation Site 2.

Carlson McCain, Inc. Page 5

4.0 MITIGATION SITE DESIGN

The mitigation design will create approximately 4.6 wetland acres (Table 4). The wetlands will have temporary hydrologic regimes and an NWI designation of PEMA. The impacted wetland area also had an NWI designation of PEMA.

Table 4. Mitigation Wetland Acres and Potential Credits

Wetland ID	NWI Classification	Restored Acres	Mitigation Ratio	Wetland Credits
Mitigation Site 1	PEMA	1.6	1:1	1.6
Mitigation Site 2	PEMA	3.0	1:1	3.0
	TOTAL	4.6		4.6

^{*}Credit ratio predicted due to expansion of wetlands and Camp Creek providing adequate hydrology and a hydrophytic vegetation seed bank.

4.1 Wetland Delineation

A wetland delineation of the RV Resort was conducted by Carlson McCain, Inc. on May 9, 2013 (Appendix B). The delineation evaluated current field conditions and utilized historic aerial photos to determine the impacted area. Soils, hydrology, and vegetation were evaluated and documented during the wetland delineation at numerous observation points. Field photographs were also collected during the wetland field delineation.

4.2 Mitigation Plan

The mitigation plan includes excavating upland areas adjacent to Camp Creek and its associated wetlands. Water flow from Camp Creek and a high ground water table will provide hydrology to the mitigation wetlands. Topsoil will be removed and stockpiled nearby and then re-spread throughout the mitigation wetlands to ensure soil quality. Sub-soils will be removed and hauled away. Proposed grading plans are included in Appendix C.

Excavation of the mitigation wetlands will commence in 2013 following the approval of the mitigation plan and weather permitting.

4.2.1 Mitigation Wetland Seeding/Planting Plan

The mitigation sites will consist of an expansion of Camp Creek and associated wetlands. Saltgrass (Distichlis spicata), alkali grass (Puccinellia nuttalliana), and foxtail barley (Hordeum jubatum) are prevalent in the Camp Creek wetlands and will aid in vegetating the mitigation wetlands. Seeds from these species and others found in the Camp Creek wetlands will disperse into the mitigation wetlands during high flow. Wetland hay from adjacent wetlands will also be spread in the mitigation wetlands to help establish a hydrophytic vegetation seed bed.

4.2.2 Noxious Weed Species Management

Chemical and/or mechanical controls will be used to manage noxious weed species if they become prevalent within the mitigation wetlands and the adjacent uplands. The mitigation wetland site will be monitored annually by the RV Resort and appropriate steps will be taken to control noxious weeds. Noxious weeds identified by the North Dakota state list will be managed. Williams County does not list any additional noxious weeds.

Plants identified as noxious weeds include:

- Absinth wormwood
- Canada thistle
- Diffuse knapweed
- Leafy spurge
- Musk thistle
- Purple loosestrife
- Russian knapweed
- Spotted knapweed
- Yellow toadflax
- Dalmation toadflax
- Salt cedar

5.0 MITIGATION ECOLOGICAL BENEFITS

5.1 Wetland Ecosystem Services

The complex of mitigation wetlands will provide multiple benefits to the surrounding environment and ecosystem. Ecosystem services as described by Gleason et al. (2008) include:

- Carbon Sequestration
- Flood Water Storage
- Reduction of Sedimentation and Nutrient Loading
- Improved downstream water quality
- Wildlife Habitat

The mitigation wetlands will provide the aforementioned ecosystem services. The mitigation wetlands will be essential to improve downstream water quality in the Little Muddy River and Lake Sakakawea by retaining sediment and nutrients that will wash into Camp Creek during future development.

6.0 MONITORING PLAN

Wetlands used for mitigation purposes require subsequent monitoring of their hydrology and vegetation to ensure they are functioning correctly. The mitigation wetlands will be evaluated with wetland criteria as identified in the Great Plains Regional Supplement to the 1987 Manual (Version 2.0) (USACE 2010).

Monitoring of the mitigation wetlands will be conducted for at least five years, or until the mitigation wetlands have met their performance standards for two consecutive years and receive consent of the USACE to end monitoring.

6.1 Monitoring Methods

Monitoring of the mitigation wetlands will consist of an annual field visit, a monitoring report, and follow-up to any questions or suggestions from regulatory personnel. A field visit to the mitigation wetlands will be performed annually in late July or early August of each year that monitoring is required. The mitigation wetlands will be evaluated by the presence of indicators of wetland criteria, i.e., hydrology, hydrophytic vegetation, and the development of hydric soils at representative observation points. The spatial location of the observation points and the photo points will be collected during the initial monitoring effort with a GPS to ensure that the same locations are evaluated during subsequent monitoring visits.

6.1.1 Photo Points

Photo points are a specified location in which photographs will be taken. Photographs taken from a specified location and consistent direction will provide a visual account of the development of the mitigation wetlands.

Photo points will be established in strategic locations in order to document the changes occurring within the mitigation wetlands. The proposed locations and directions of the photo points can be seen in Figure 4 (Appendix B). The photo points will be marked with a metal stake and the spatial locations will be collected with a GPS. Photographs taken from these locations will have consistent camera settings and a documented viewing direction. Photo identification cards with pertinent information to the photo point will be placed in the photograph's field of view. Information documented on the photo identification card will include:

- Unique photo point identification
- Photographer's initials
- Date and time
- Magnetic declination
- Location

6.1.2 Wetland Vegetation

Wetland vegetation composition will be evaluated at each observation point following the guidelines set forth by the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0) (USACE 2010). An additional vegetation species list will be compiled while traversing between observation points. The adjacent uplands will be evaluated for the presence of noxious weeds.

6.1.3 Wetland Hydrology

Wetland hydrology indicators will be evaluated at each observation point following the guidelines set forth by the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0) (USACE 2010). Hydrology indicators will also be identified while traversing between observation points.

6.1.4 Hydric Soil Indicators

Soil pits will be evaluated at each observation point to identify the development of hydric soils. Hydric soils indicators will develop slowly over time and may not be visible during the monitoring effort. Hydric soil indicators will be based on the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0) (USACE 2010).

6.2 Problem Areas

Problem areas will identified and documented during the monitoring visits. Photographs and notes detailing each problem area will be collected during the field monitoring. Problems areas may involve erosion, areas barren of vegetation, etc.

6.3 Monitoring Report

Monitoring reports will be completed after each monitoring visit and submitted to the USACE North Dakota Regulatory Office in Bismarck, North Dakota. Each report will follow the guidelines set forth by the Mitigation Monitoring Plan (USACE 2010) and contain:

- USACE Permit Number
- Name and contact information of permittee, point of contact, and field observer(s)
- Name of person conducting monitoring reports and dates of monitoring visits
- Directions to and map of mitigation area
- Summary paragraph describing the project's purpose, impacted area's acreage and type, and mitigation wetlands acreage and type
- Timeline of mitigation wetlands' construction activities and final date of their completion
- Photographs and a narrative summary of the mitigation wetlands' progress and development into functional wetlands, i.e., meeting wetland criteria indicators
- Photographs and descriptions of any problem areas
- Recommendations for corrective or remedial actions (if necessary)
- Description and dates of implemented corrective actions (if applicable)

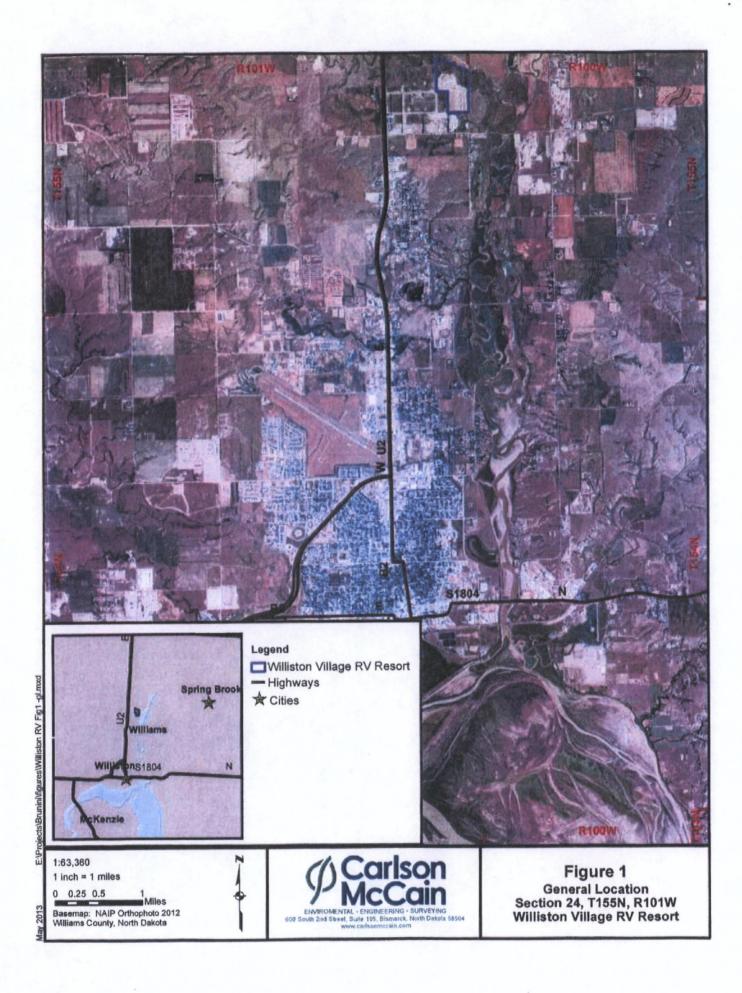
7.0 REFERENCES

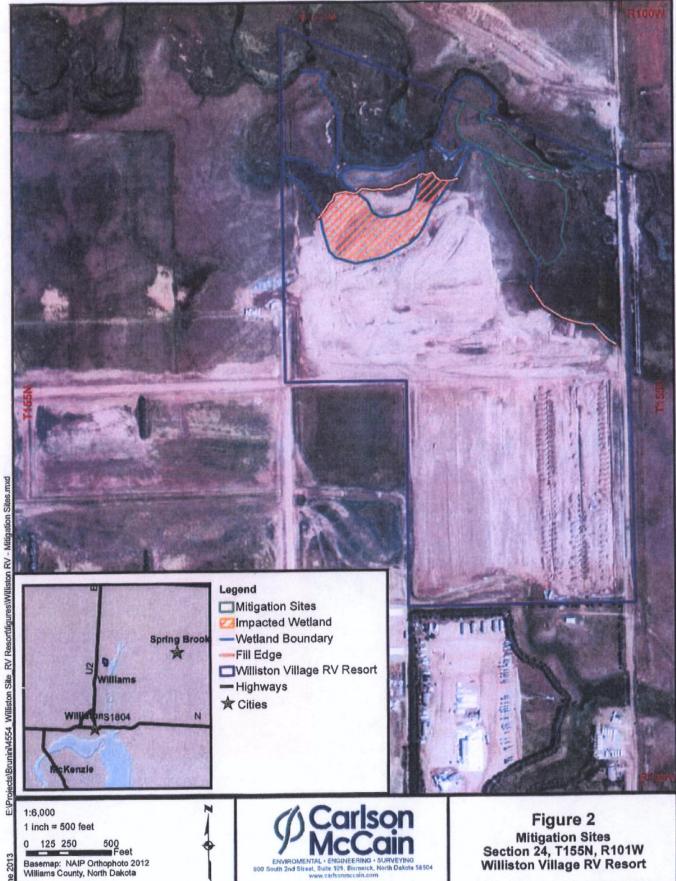
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Appendix A

Figures





Appendix B

Williston Village RV Resort Wetland Delineation Report

See May 17,2013, letter.
Appendix B of June 20,2013,
letter does not contain
p. 3, 3.0 Results —
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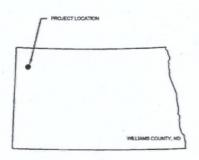
Appendix C

Mitigation Wetlands Design

WETLAND MITIGATION PLAN DRAWINGS WILLISTON VILLAGE RV RESORT

BRUNINI FIRM

SECTION 24, T155N, R101W WILLIAMS COUNTY, NORTH DAKOTA





LOCATION MAP

SHEET INDEX

ESTIMATED EARTHWORK QUANTITIES



6/10/2013

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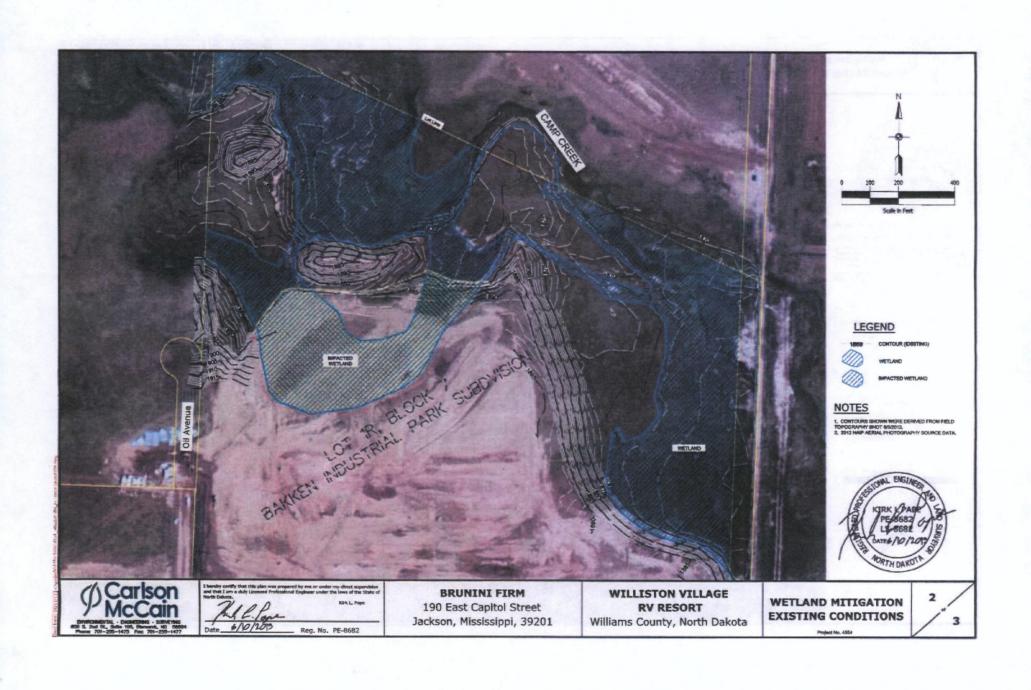
BRUNINI FIRM 190 East Capitol Street Jackson, Mississippi, 39201

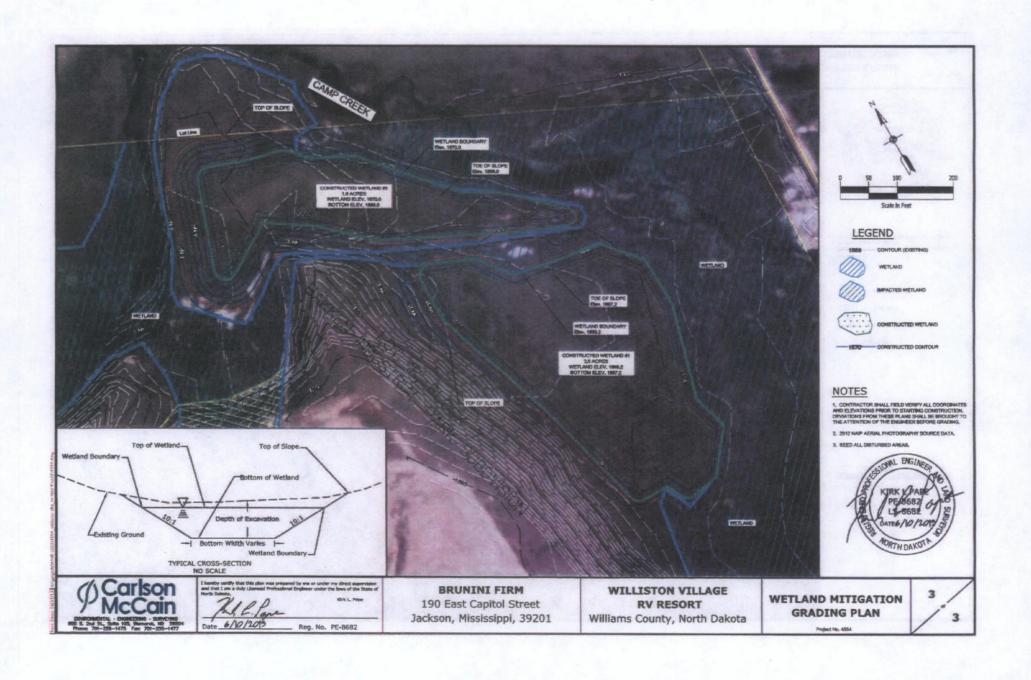
WILLISTON VILLAGE **RV RESORT** Williams County, North Dakota

WETLAND MITIGATION **COVER SHEET**

1

Project No. 4554









May 17, 2013

Mr. John Brunini Brunini Firm The Pinnacle Building 190 East Capitol Street, Suite 100 Jackson, MS 39201

Dear Mr. Bunini,

Carlson McCain, Inc. is pleased to submit the Wetland Delineation Report for your review.

Please call me at 701-595-7004 if you have any questions or need additional information.

Sincerely,

Greg Meyer, MS

Ecologist

WETLAND DELINEATION REPORT

Williston Village RV Resort Section 24, T155N, R101W Williams County, North Dakota Project #4554

Prepared for:

Mr. John Brunini Brunini Firm The Pinnacle Building 190 East Capitol Street, Suite 100 Jackson, MS 39201

May 17, 2013



600 South 2nd Street, Suite 105 Bismarck, ND 58504 Tel 701-255-1475 Fax 701-255-1477 www.carlsonmccain.com

ENVIRONMENTAL • ENGINEERING • LAND SURVEYING

Williston Village RV Resort Wetland Delineation Section 24, T155N, R101W Williams County, North Dakota

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1.0 SCOPE OF WORK

Construction of the Williston Village RV Resort has impacted a former oxbow / meander channel of Camp Creek in Section 24, T155N, R101W, Williams County, North Dakota (Appendix A, Figure 1). The RV Resort is located within the Bakken Industrial Park Subdivision of Williston, North Dakota (Project Area). Camp Creek and associated wetlands flow east through the north portion of the Project Area (Appendix A, Figures 2 and 3).

Carlson McCain, Inc. delineated the edge of Camp Creek and its associated wetlands within the Project Area (Appendix A, Figures 3 and 4). The Project Area is approximately 117 acres in size and wetlands are only located in the northern portion of the Project Area. The Project Area is located within the Little Muddy River (10110102) Hydrologic Unit Code.

The wetland field delineation was conducted on May 9, 2013 by Greg Meyer, Ecologists, Carlson McCain, Inc.

Carlson McCain, Inc. Page 1

2.0 PROCEDURES

Resource information was used to identify and aid in delineation of potential wetlands within the Project Area. Williams County NAIP 2012, 2010, 2009, and 2005 aerial photographs; U.S. Fish and Wildlife Service National Wetland Inventory (USFWS, 2013); and the digital web soil survey of Williams County (USDA-NRCS, 2013) were consulted prior to the wetland field delineation.

The wetland field delineation was conducted in accordance with the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0) (Manual).

All wetland areas were documented with paired upland and wetland observation points. The Wetland Determination Data Form of the Great Plains Manual was completed for each of the observation points. Existing vegetation was classified using hydrophytic vegetation criteria outlined in the Manual and the National Wetland Plant List (Lichvar 2012). Hydric soil indicators were determined using the Field Indicators of Hydric Soils in the United States; Guide for Identifying and Delineating Hydric Soils, Version 7.0 (USDA-NRCS, 2010). Hydrology was determined on-site by observation of hydrologic indicators.

Numerous undocumented boundary-observation points evaluated soils, vegetation, hydrology, and landscape indicators to accurately delineate the wetland boundaries. The frequency of these points was increased in transitional areas between wetland and upland, in which the boundary was not readily apparent. Once determined, the boundaries of delineated wetlands were collected with a Trimble GeoXH Global Positioning System (GPS).

A description of the wetland type and documentation of the vegetation, hydrology, and hydric soils were recorded on the associated USACE Wetland Determination Data Forms (Appendix B) and are identified by either a sequential number (i.e. 1w, 1u, 1w2, 1u2, etc.). The observation point is designated as a wetland soil (w) or upland soil (u). Observation points and wetlands were numbered chronologically in the order they were visited.

The impacted wetland area was delineated by utilizing aerial photography and observation point locations from the wetland field delineation.

Carlson McCain, Inc. Page 2

3.0 RESULTS

Camp Creek and associated wetlands flow east through the northern portion of the Project Area towards the Little Muddy River (Appendix A, Figures 2 and 3). Construction of the RV Resort has impacted approximately 4.5 wetland acres of a former oxbow / meander channel of Camp Creek (Appendix A, Figure 4). Fill materials (approximately 10 to 15 feet in depth) have been placed on the wetland area and has eliminated wetland functions. Silt fences have been erected along the bottom of the fill area to decrease erosion. Field photographs of the impacted wetland area are included in Appendix C.

The impacted wetland is hydrologically connected with Camp Creek. Alkali grass (*Puccinellia nuttaliana*), saltgrass (*Distichlis spicata*), and foxtail barley (*Hordeum jubatum*) are the prevalent vegetation within the highly saline Camp Creek and its associated wetlands.

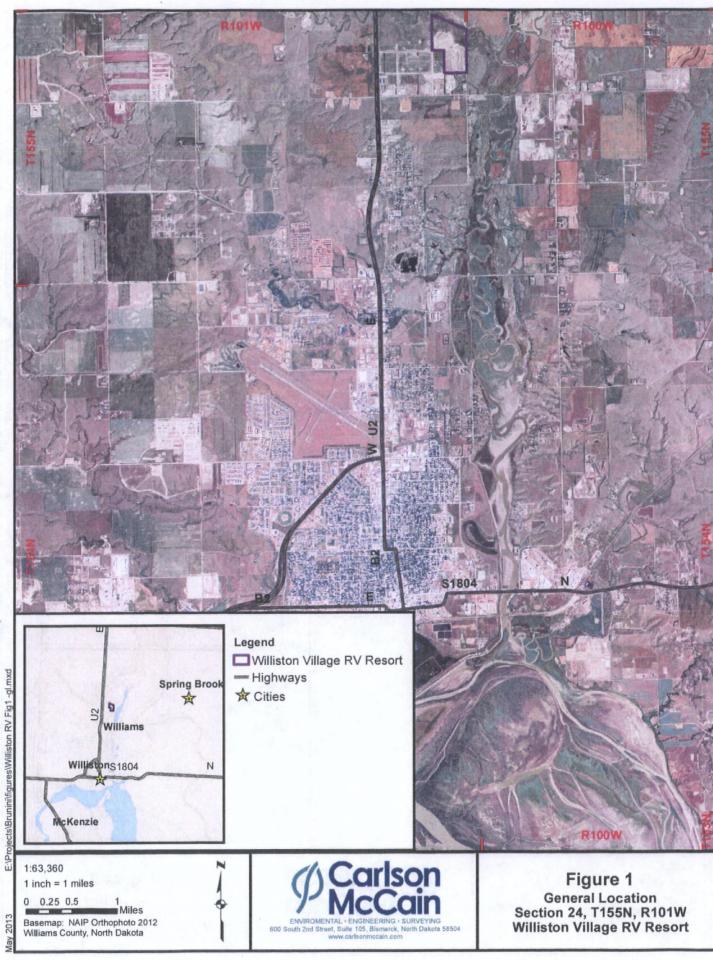
Carlson McCain, Inc. - Page 3

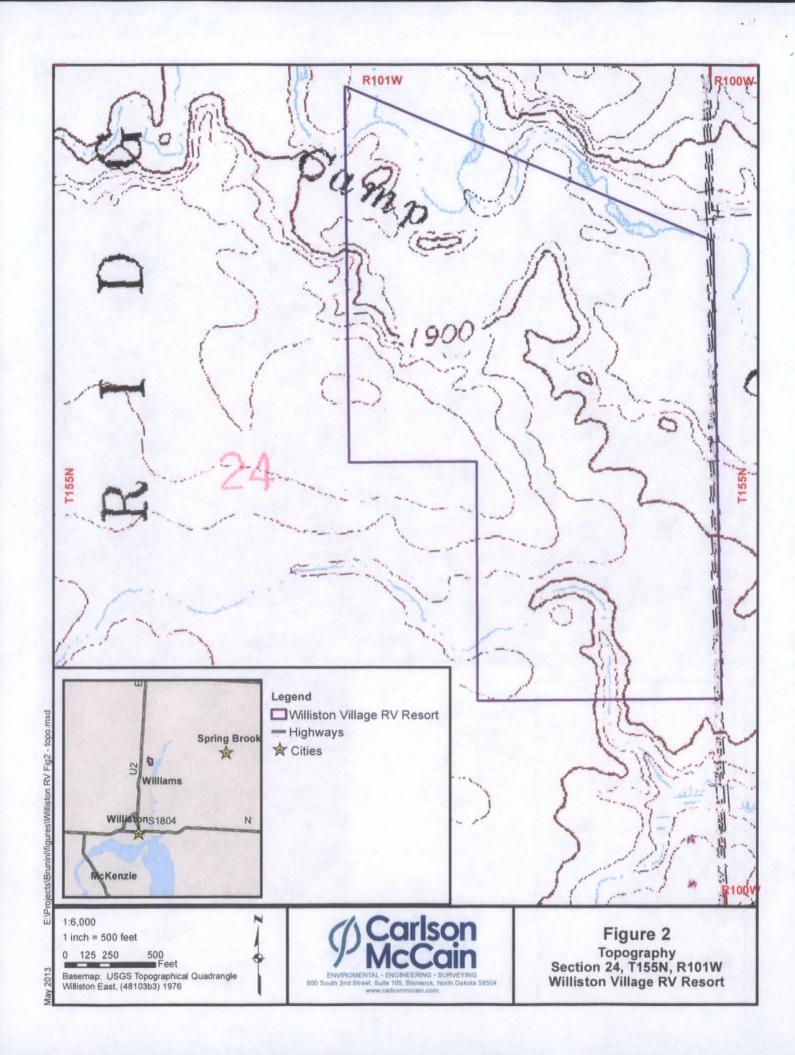
4.0 REFERENCES

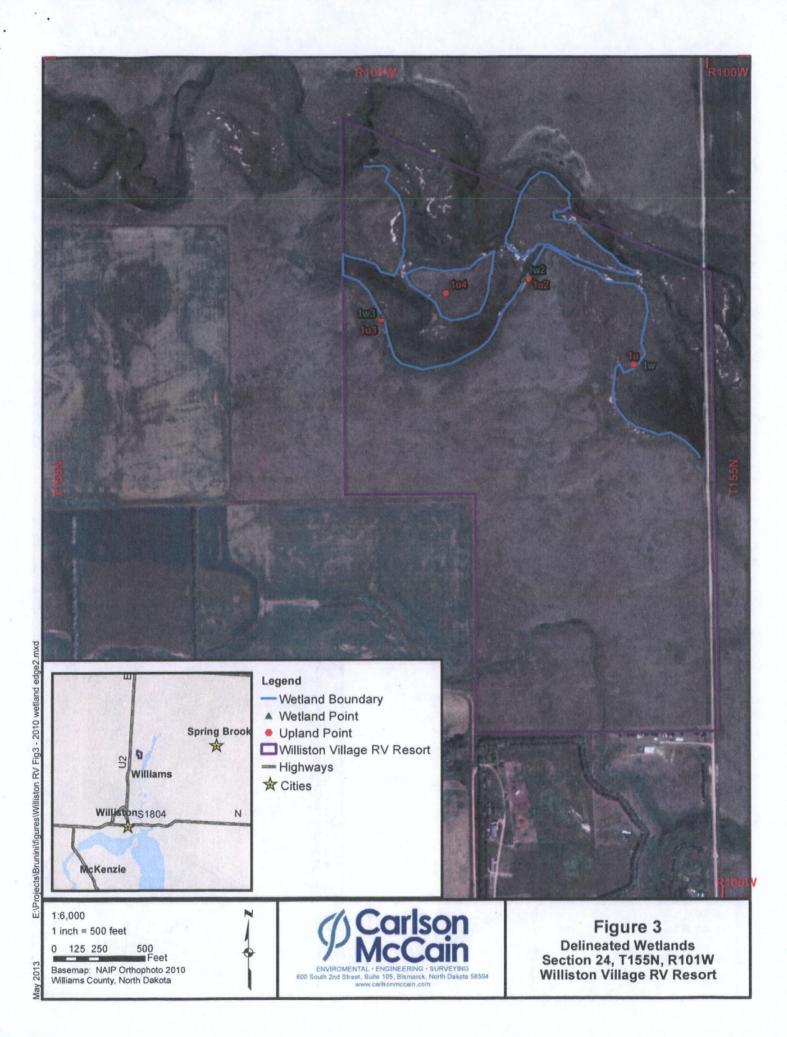
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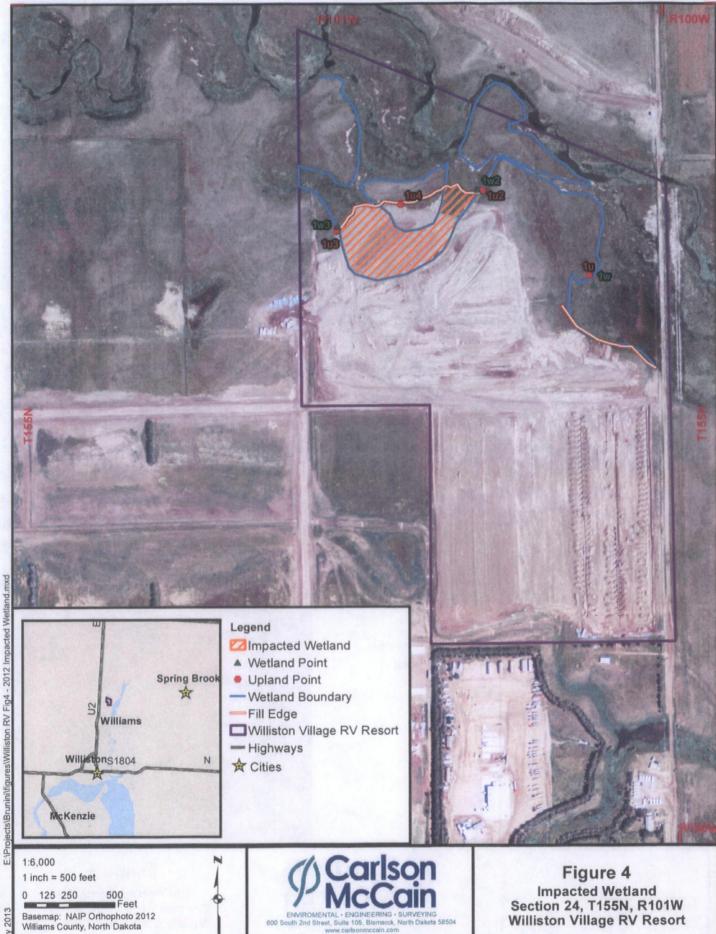
Appendix A

Figures









Appendix B

U.S. Army Corps of Engineers Wetland Determination Data Forms

Project Site: Williston Village RV Resort	***************************************		City/County: Williams Sampling Date: 5/9/13
Applicant/Owner: Carlson McCain		•	State: ND Sampling Point: 1w
Investigator(s): Greg Meyer			Section, Township, Range: 24-T155N-R101W
Landform (hillslope, terrace, etc.): drainageway		Loc	cal relief (concave, convex, none): concave Slope (%): <1
Subregion (LRR): <u>F</u> Lat: <u>48.235</u>	SE18N	2000	Long: -103.605565W Datum: NAD 83
Soil Map Unit Name: 2270 - Harriet and Stirum Soils		•	NWI classification: none
Are climatic / hydrologic conditions on the site typical fo			
		antly disturbed	
		lly problematic	·
Are regulation [1], Sun [2], Or rightnogy	Li, Hattira	ny probiomatio	th house, explain any anomore in remaine.
SUMMARY OF FINDINGS - Attach site man s	howing sa	molina poin	nt locations, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes 🛛		
Hydric Soil Present?	Yes 🗵		
Wetland Hydrology Present?	Yes 🛭		to the Complian Association a Mattend O. No. 171
	100 10	110 🚨	Is the Sampling Area within a Wetland? Yes 🛛 No 🗆
Remarks:			
Floodplain wettand adjacent to Camp Creek.			
VECETATION Line colontific names of plant			
VEGETATION – Use scientific names of plant	Absolute	Dominant	Indicator Dominance Test Worksheet:
Tree Stratum (Plot Size:)	% Cover	Species?	Status Dominance rest worksneet:
1			Number of Dominant Species That Are ORL FACW or FAC: (A)
2			That Are OBL, FACW, or FAC:
3			Total Number of Dominant Species Agrees All Strate: (B)
4			Species Across Air Strata.
		= Total Cove	/A/DI
Sapling/Shrub Stratum (Plot Size:)			That Are Obc., FAGW, or FAG.
1			Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
3			OBL species x1 =
4			FACW species x2 =
5			FAC species x3 =
		= Total Cove	rer FACU species x4 =
Herb Stratum (Plot Size: 5ft)			UPL species x5 =
1. Hordeum jubatum	<u>20</u>	<u>yes</u>	FACW Column Totals: (A) (B)
2. Puccinellia nuttaliana	<u>40</u>	<u>yes</u>	OBL Prevalence Index = B/A =
3. Carex praegracilis	20	yes	FACW Hydrophytic Vegetation Indicators:
4. <u>Distichlis spicata</u>	<u>40</u>	<u>yes</u>	FACW 1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is >50%
6			3 – Prevalence Index is ≤3.01
7			
8			4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
9			Problematic Hydrophytic Vegetation ¹ (Explain)
10			Indicators of hydric soil and wetland hydrology must be present,
	120	= Total Cove	contains attacomband on morbitoments
Woody Vine Stratum (Plot Size:)			
1			
2			-
		= Total Cove	ver
% Bare Ground in Herb Stratum 0		- 1014, 0010	Hydrophytic Vegetation Present? Yes ⊠ No □
			injuriqui, ao egoularen 1000 in 100 Ego 100 Ego
Remarks:			
Salt along bottom of vegetation.			

SOIL											Samplin	g Point:	1w		
Profile	Description: (Descri	ibe to the	e depth	needed	d to doc	ument the indicator or	confirm the	absence	of indicat	tors.)					
De	pth Ma	atrix				Redox Feat	ures								
(inche	s) Color (mois	t)	%	C	olor (Mo	oist) %	Type ¹	Loc ²		Texture	•	R	emarks		
<u>0</u> .	6 2.5Y 3/1		100							sicl					
6-	9 2.5Y 3/2		90	2	2.5Y 5/1	<u>10</u>	₫	<u>m</u>		sic	<u>Bw</u>				
9-	16 Gley 1 4/5	<u>G</u>	<u>60</u>						_	<u>cl</u>	<u>C</u>				
	2.4Y 4/1		40						_	<u>cl</u>	<u>c</u>				
		_													
_		-						-	_						
		-							_						
¹Type:	C= Concentration, D:	- Deoletic=	on. RM=	Reduc	ed Matr	ix, CS=Covered or Co	ated Sand C	Grains. ² L	_ .ocation:	PL=Por	e Lining. M⊯Matri	ix			
	Soil Indicators: (Ap										ators for Proble		vdric Soi	ls³:	
1	Histosol (A1)	poa.o.o		.,,		Sandy Gleyed Matrix	(S4)				1 cm Muck (A9				
l	Histic Epipedon (A2)					Sandy Redox (S5)	. (5 .)			_	Coast Prairie F			F G. H	n.
	Black Histic (A3)					Stripped Matrix (S6)					Dark Surface (, 0, 1	'
l	Hydrogen Sulfide (A4)					Loamy Mucky Minera	al /E1\				High Plains De		-		
l					×						(LRR-H outs	-		P. 7991	
1 =	Stratified Layers (A5)					Loamy Gleyed Matrix Contact Matrix (53)					• •		LNM 12	= 13)	
	cm Muck (A9) (LRR					Depleted Matrix (F3)					Reduced Vertic	•	-0\		
	Depleted Below Dark		(A11)			Redox Dark Surface					Red Parent Ma		•	ı di	
1	Thick Dark Surface (A					Depleted Dark Surfa					Very Shallow D		•	12)	
l	Sandy Mucky Mineral 2.5 CM Mucky Peat or		2\/I DD	G III)		Redox Depressions				_	Other (Explain cators of hydroph			d wetlan	d
l	•	-			ш	High Plains Depress				hydro	ology must be pre				_
	cm Mucky Peat or P ctive Layer (if preser		(LNR P)			(MLRA 72 & 73 of	Linn II)			probl	ematic.				
	cuve Layer (II preser	uj.]			•		
Type:		-											_		_
	(Inches):			-,						Hydr	ic Soils Present	? Ye:	s 🛛	No_	<u> </u>
Remar															
Gleys	oils along drainagewa	у.													
		<u> </u>													
HYDR	OLOGY								_						
Wetlar	nd Hydrology Indicat	ors:													
Primar	y Indicators (minimum	of one r	equired:	; check	all that	apply)				Secon	dary Indicators (2	or more	required)	
⊠ :	Surface Water (A1)				×	Salt Crust (B11)					Surface Soil Cracl	ks (B6)			
⊠	High Water Table (A2)				Aquatic Invertebrates	(B13)				Sparsely Vegetate	ed Conca	ve Surfa	ce (B8)	
⊠ :	Saturation (A3)					Hydrogen Sulfide Od	or (C1)				Orainage Patterns	(B10)			
	Water Marks (B1)					Dry Season Water Ta	able (C2)	•			Oxidized Rhizospl	heres alc	ng Living	Roots (C3)
⊠ :	Sediment Deposits (B	2)				Oxidized Rhizospher	es along Liv	ing Roots	(C3)		(where tilled)				
⊠ :	Drift Deposits (B3)					(where not tilled)					Crayfish Burrows	(C8)			
	Algal Mat or Crust (B4	l)				Presence of Reduce	d Iron (C4)				Saturation Visible	on Aeria	l Imagery	(C9)	
	Iron Deposits (B5)					Thin Muck Surface (0	C7)				Geomorphic Posit	ion (D2)			
	nundation Visible on	Aerial Im	agery (E	37)		Other (Explain in Rer	narks)			⊠ F	AC-Neutral Test	(D5)			
	Water-Stained Lea					, ,	·				rost-Heave Hum		07) (LRR	F).	
	bservations:	(<u>′</u>			·····									
	Water Present?	Yes	×	No		Depth (inches):	2	1							
	Table Present?					Depth (inches):	1	-							•
	ion Present?	Yes	×	No	ليا	Depth (inches).	,]							
	es capillary fringe)	Yes	×	No		Depth (inches):	0		Wetlan	d Hydro	ology Present?	Yes	×	No	
		ream gai	uge, mo	nitoring	y well, a	erial photos, previous	inspections	, if availal	ble:						
Rema	rks:														

Project Site: Williston Village RV Resort			City/County: <u>Williams</u> Sampling Date: <u>5/9/13</u>
Applicant/Owner: Carlson McCain			State: ND Sampling Point: 1u
Investigator(s): Greg Meyer			Section, Township, Range: 24-T155N-R101W
Landform (hillslope, terrace, etc.): flat along drainage	way	Local	al relief (concave, convex, none): <u>plane</u> Slope (%): <1
Subregion (LRR): <u>F</u> Lat: <u>48.235</u>	766N		Long: -103.605654W Datum: NAD 83
Soil Map Unit Name: 2270 - Harriet and Stirum Soils	0-2% slopes		NWI classification: none
Are climatic / hydrologic conditions on the site typical for	this time of year	r? Yes	☑ No ☐ (If no, explain in Remarks.)
Are Vegetation □, Soil □, or Hydrology	□, significantl	ly disturbed?	d? Are "Normal Circumstances" present? Yes 🛛 No 🗖
Are Vegetation □, Soil □, or Hydrology	, naturally p	roblematic?	? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh			t locations, transects, important features, etc.
Hydrophytic Vegetation Present?		No 🗆	•
Hydric Soil Present?		No 🗵	
Wetland Hydrology Present?	Yes 🖾 I	No 🗆	Is the Sampling Area within a Wetland? Yes No No
Remarks:			
Flat along floodplain wetland adjacent to Camp Cree	⊭k.		
VEGETATION Line esignific names of plants			
VEGETATION – Use scientific names of plants		ominant	Indicator Comingnes Test Worksheet
Tree Stratum (Plot Size:)	% Cover Sr	pecies?	Status Dominance Test Worksneet:
1			Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2 3.			, , , , , , , , , , , , , , , , , , ,
4.			Total Number of Dominant Species Across All Strata: 2 (B)
4		Total Cover	·····
Sapling/Shrub Stratum (Plot Size:)		Total Corc.	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1			Prevalence Index worksheet:
2		_	Total % Cover of: Multiply by:
3			OBL species x1 =
4			FACW species x2 =
5.			
	=	Total Cover	er FACU species x4 =
Herb Stratum (Plot Size: 5ft)			UPL species x5 =
1. Agropyron canium	<u>40</u> ye	25	FACU 1) Column Totals: (A) (B)
2. Grindelia squarrosa	10 no		UPL Prevalence Index = B/A =
3. Sonchus arvensis	20 ye		FAC Hydrophytic Vegetation Indicators:
Distichlis spicata	40 ye		FACW 1 - Rapid Test for Hydrophytic Vegetation
5			<u>x</u> 2 - Dominance Test is >50% - ^
6			3 – Prevalence Index is ≤3.0¹
7.		-	
8			4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9			Problematic Hydrophytic Vegetation ¹ (Explain)
10			Indicators of hydric soil and wetland hydrology must be present,
	<u>110</u> =	Total Cover	unless disturbed or problematic.
Woody Vine Stratum (Plot Size:)			
1			
2			
		Total Cover	or .
% Bare Ground in Herb Stratum Q			Hydrophytic Vegetation Present? Yes ⊠ No □
Remarks:	_		
•			

SUIL											Sampii	ig Point:	U		
1	•		depth	needec	to doc	ument the Indicator of		absence of	indicato	ors.)					
Depth	Mai					Redox Fe									
(inches)	Color (moist)	<u> </u>	%	Co	olor (Mo	ist) %	Type ¹	Loc2		Texture	<u> </u>	. Я	emarks		
<u>0-6</u>	2.5Y 3/2		<u>100</u>							sici					
4-9	<u>2.5Y 4/3</u>		<u>100</u>							sicl					
<u>9-16</u>	<u>2.5Y 3/3</u>		<u>100</u>							sici					
		-							•						
		-													
		-			—				•	_					
		-							•						
						x, CS=Covered or C	oated Sand G	arains. Lo	cation: I				adala Ca	u3.	
1 -	Indicators: (App	olicable to	o all LH	iks, un	_	· ·	win (CA)				ators for Probl			118 :	
	iol (A1) Seisselen (A0)					Sandy Gleyed Mat					1 cm Muck (A			- E G L	_1 1
	Epipedon (A2)					Sandy Redox (S5)					Coast Prairie			r, u, r	ויי
i	Histic (A3)					Stripped Matrix (Se	-				Dark Surface				
1 = -	gen Sulfide (A4)	DD =\				Loamy Mucky Mine					High Plains D	•		& 7 21	
	ied Layers (A5) (I	-				Loamy Gleyed Mat					(LRR H out		LNM (4°	u 13)	
-	Muck (A9) (LRR I tod Bolow Dark S	•	A113			Depleted Matrix (Findamental Redox Dark Surface	-				Reduced Vert Red Parent M	-	- 91		
	ted Below Dark S Dark Surface (A1		ALI			Depleted Dark Sur	` '				Very Shallow		•	12)	
1	Mucky Mineral (-				Redox Depression	• •				Other (Explain			٠-,	
	M Mucky Peat or		21/LRR	G. H)		High Plains Depres					cators of hydrop			d wetlar	nd
_	Mucky Peat or Pe	-			_	(MLRA 72 & 73 c					ology must be pr lematic.	esent, un	ess distu	irbed or	
	Layer (if presen			····						propr	citatic.				
Type:		•													
Depth (Inche	es):									Hvdi	ic Soils Presen	t? Ye	s 🗆	No	×
Remarks:															
	soils above floodp	alain wet	land												
	NOV.	11.11.11.11.11.11.11											,		
HYDROLO												<u> </u>			
1	drology Indicate cators (minimum		navirod	· abaak	oll that	anniu)				Sacan	dary Indicators (2 or more	roquiroc	w.	
		Of Otte 10	equireu	, Crieck									requirec	<u>''</u>	
	ce Water (A1)				Ø	Salt Crust (B11)	ton (B13)				Surface Soil Cra		wa Gurfa	oo /D0\	
l	Water Table (A2)					Aquatic Invertebrat					Sparsely Vegeta		ive Suna	ice (68)	
ł	ation (A3)					Hydrogen Sulfide C					Drainage Patterr		na 1 1-2-	n Daste	(CO)
	r Marks (B1)	»\				Dry Season Water		vina Deete ((Ca)		Oxidized Rhizos	Jieres ak	ng Livin	y moois	(63)
	nent Deposits (B2	2)				Oxidized Rhizosph	eres along Liv	ving Hoots ((C3)		(where tilled)	(CO)			
	Deposits (B3)					(where not tilled)	and June 104			_	Crayfish Burrows		l Ima		
1 -	Mat or Crust (B4))				Presence of Reduc				_	Saturation Visible		Imager	y (C9)	
I =	Peposits (B5)					Thin Muck Surface	•				Geomorphic Pos	, ,			
·	ation Visible on A			B7)		Other (Explain in R	iemarks)				FAC-Neutral Tes				
	er-Stained Leav	es (B9))								Frost-Heave Hur	nmocks (ار (LRF	i.F)	
Field Obser			_		_										
Surface Wat		Yes		No	X	Depth (inches)		}							
Water Table	Present?	Yes		No	×	Depth (inches)):								
Saturation P		Yes	×	No		Depth (inches)): 0	[,	Wetland	i Hydro	ology Present?	Yes	X	No	
	pillary fringe)	eam aci		nitorio	n well a	erial photos, previou	is inspections) if availabl	le.						
Describe no	Journey Data (811)	vanı yal	ugo, mu	, noni	y wen, d	onal priotos, previot	- mapaonona	,, n avandu							
									_						
Remarks:															
					•									•	

Project Site: Williston Village RV Resort			City/Co	unty: <u>Williams</u> Sampling Date: <u>5/9/13</u>
Applicant/Owner: Carlson McCain				State: ND Sampling Point: 1w2
Investigator(s): <u>Greg Meyer</u>			Section	, Township, Range: <u>24-T155N-R101W</u>
Landform (hillslope, terrace, etc.): <u>drainageway</u>			Local relief (cond	ave, convex, none): concave Slope (%): ≤1
Subregion (LRR): <u>F</u> Lat: <u>48.237</u>			Long: <u>-1</u>	03.608145W Datum: NAD 83
Soil Map Unit Name: 2270 - Harriet and Stirum Soils				NWI classification: none
Are climatic / hydrologic conditions on the site typical fo				
**	, signifi	-		Normal Circumstances" present? Yes 🛛 No 🗍
Are Vegetation ☐, Soil ☐, or Hydrology	, natura	ılly probler	natic? (if ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map si	howing sa	mpling p	oint locations	, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes 🗵		_	
Hydric Soil Present?	Yes 🖸		<u> </u>	
Wetland Hydrology Present?	Yes 2	3 No	☐ Is the Sam	pling Area within a Wetland? Yes 🗵 No 🗌
Remarks:			,	
Old oxbow / meander channel adjacent to Camp Cre	ek. Fili pus	hed into p	part of the oxbov	channel.
VEGETATION – Use scientific names of plant	s			
Tree Stratum (Plot Size:)	Absolute % Cover	Domina Species		Dominance Test Worksheet:
1				Number of Dominant Species
2				That Are OBL, FACW, or FAC: (A)
3				Total Number of Dominant
4				Species Across All Strata:
Sapling/Shrub Stratum (Plot Size:)		= Total	Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1				Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3				OBL species x1 =
4				FACW species x2 =
5				FAC species x3 =
		= Total	Cover	FACU species x4 =
Herb Stratum (Plot Size: 5ft)				UPL species x5 =
1. <u>Hordeum jubatum</u>	<u>30</u>	<u>yes</u>	FACW	Column Totals: (A) (B)
2. <u>Puccinellia nuttaliana</u>	<u>80</u>	<u>ves</u>	OBL	Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4				x 1 − Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 Prevalence Index is ≤3.01
7				4 - Morphological Adaptations ¹ (Provide supporting data in
8				Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation' (Explain)
10				Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	<u>110</u>	= Total	Cover	unless disturbed of problematic.
Woody Vine Stratum (Plot Size:)				
1				
2			Cover	
9/ Boro Cround in Unit Otention 5		= Total	Cover	Hudronistia Vagatatian Brasanta Van 57 Mar 17
% Bare Ground in Herb Stratum 0				Hydrophytic Vegetation Present? Yes 🛛 No 🗆
Remarks:				
Salt along bottom of vegetation.				
Ĭ				· ·

Depth	Mate	iх			Redox F	eatures			•
inches)	Color (moist)	%		olor (Mo	ist) %	Type ¹	Loc²	– Texture	Remarks
0-4	2.5Y 5/1	95	GI	ey 1 4/5	5G 5	<u>d</u>	m	sicl	
4-12+	2,5Y 5/1	80	GI	ey 1 4/5	5G <u>20</u>	<u>d</u>	m	<u>cl</u>	-
			-		<u></u>				-
			_		********	<u> </u>			<u> </u>
									
			_						-
			_	·					A4 Auditubiusus
	4		_						<u> </u>
/pe: C= C	oncentration, D=D	epletion, R	M=Reduc	ed Matr	ix, CS=Covered or	Coated Sand C	Grains. ² Locat	ion: PL=Po	re Lining, M=Matrix
dric Soil	Indicators: (Appl	icable to all	LRRs, un	less oth	erwise noted.)			India	cators for Problematic Hydric Soils ³ :
Histos	ol (A1)				Sandy Gleyed Ma	atrix (S4)			1 cm Muck (A9) (LRR I, J)
Histic I	Epipedon (A2)				Sandy Redox (S5	5) -			Coast Prairie Redox (A16) (LRR F, G, H)
Black I	Histic (A3)	,			Stripped Matrix (8	56)			Dark Surface (S7) (LRR G)
Hydrog	gen Sulfide (A4)				Loamy Mucky Mi	neral (F1)			High:Plains Depressions (F16)
Stratifi	ed Läyers (A5) (L	RR F)			Loamy Gleyed M	atrix (F2)	•		(LRR H outside of MLRA 72 & 73)
1 cm N	fluck (A9) (LRR F	, G, H)		×	Depleted Matrix (F3)			Reduced Vertic (F18)
Deplet	ed Below Dark Si	ırface (A11)		Redox Dark Surfa	ace (F6)			Red Parent Material (TF2)
Thick I	Dark Surface (A12	2) .			Depleted Dark Su	ırface (F7)			Very Shallow Dark Surface (TF 12)
Sandy	Mucky Mineral (S	i1)			Redox Depressio			314	Other (Explain in Remarks)
	Mucky Peat or F		-		High Plains Depr	, ,		hydr	cators of hydrophytic vegetation and wetland ology must be present, unless disturbed or
<u>_</u>	lucky Peat or Pea		3 F)		(MLRA 72 & 73	of LRR H)			lematic:
pth (Inche marks:		<u> </u>	old oxbow	v / mear	nder channel of dra	inageway (Cam	np Creek).	Hydi	ric Soils Present? Yes 🛛 No
pe: pth (Inche marks:	es):	<u> </u>	old oxbov	v / mear	nder channel of dra	inageway (Carr	np Creek).	Hydi	ric Soils Present? Yes 🗵 No
pe: pth (Inche marks: duced soi	is):	<u> </u>	old oxbov	v / mear	nder channel of dra	inageway (Cam	np Creek).	Hydi	ric Soils Present? Yes 🗵 No
pe: pth (Inche marks: duced soi	is):	tions along	old oxbow	v / mear	nder channel of dra	inageway (Carr	np Creek).	Hydi	ric Soils Present? Yes 🛛 No
pth (Inche marks: duced soi 'DROLO	is): is with Gley deple	tions along				inageway (Cam	np Creek).		ric Soils Present? Yes No No dary Indicators (2 or more required)
pe: pth (Inche marks: duced soi DROLO ttand Hyu	is with Gley deple GY drology Indicato	tions along				inageway (Carr	np Creek).	Secon	
pet (Inche marks: duced soi tand Hymary India Surface	is with Gley deple GY drology Indicato cators (minimum o	tions along		all that	apply)		np Creek).	Secon	dary Indicators (2 or more required)
pet (Inche marks: duced soi VDROLO etland Hyd mary India Surfac High V	GY drology Indicato cators (minimum o	tions along		all that	apply) Salt Crust (B11)	ates (B13)	np Creek).	Secon	dary Indicators (2 or more required) Surface Soil Cracks (B6)
pet (Inche marks: duced soi 'DROLO tland Hyd mary India Surfac High V	GY drology Indicato cators (minimum o ce Water (A1) Vater Table (A2)	tions along		t all that	t apply) Salt Crust (B11) Aquatic Invertebr	ates (B13) Odor (C1)	np Creek).	Secon	dary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10)
pth (Inche marks: duced soi 'DROLO ttand Hyd mary Indic Surfac High W Satura Water	GY drology Indicato cators (minimum of the Water (A1) Vater Table (A2)	tions along		all that	t apply) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide	ates (B13) Odor (C1) er Table (C2)		Secon	dary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10)
pth (Inche marks: duced soi //DROLO //	GY drology Indicato cators (minimum of the Water (A1) Vater Table (A2) ation (A3) Marks (B1)	tions along		all that	apply) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Dry Season Wate	ates (B13) Odor (C1) er Table (C2) cheres along Liv		Secon	dary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots (
pe: pth (Inche marks: duced soi /DROLO etland Hy mary Indic Surfac High V Satura Water Sedim Drift D	GY drology Indicato cators (minimum of the Water (A1) Vater Table (A2) Marks (B1) tent Deposits (B2)	tions along		all that	sapply) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Dry Season Wate Oxidized Rhizosp	ates (B13) Odor (C1) er Table (C2) theres along Liv		Secon	dary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots ((where tilled)
pe: pth (Inche marks: duced soi /DROLO etland Hy mary Indic Surfac High V Satura Water Sedim Drift D Algal	GY drology Indicato cators (minimum of the Water (A1) Vater Table (A2) Marks (B1) Ment Deposits (B2) deposits (B3)	tions along		all that	sapply) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Dry Season Wate Oxidized Rhizosp	ates (B13) Odor (C1) or Table (C2) wheres along Liv) uced Iron (C4)		Secon	dary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots ((where tilled) Crayfish Burrows (C8)
pet (Inche marks: duced soi duced so	is with Gley depleting of the Grant	tions along	red; check	all that	salt Crust (B11) Aquatic Invertebre Hydrogen Sulfide Dry Season Wate Oxidized Rhizosp (where not tilled Presence of Redu	ates (B13) Odor (C1) er Table (C2) cheres along Liv) uced Iron (C4)		Secon	dary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots ((where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
pet (Inche marks: duced soi duced soi duced soi diand Hydrary India Surface Water Sedim Drift E Algal I Iron D Inunda	is with Gley depleting of the control of the contro	tions along rs: of one requi	red; check	all that	salt Crust (B11) Aquatic Invertebric Hydrogen Sulfide Dry Season Wate Oxidized Rhizosp (where not tilled Presence of Redu Thin Muck Surface	ates (B13) Odor (C1) er Table (C2) cheres along Liv) uced Iron (C4)		Secon	dary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots ((where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
pth (Inche marks: duced soi duced soi duced soi diand Hyd mary India Surfac High Water Sedim Drift D Algal I Iron D Inunda	Is with Gley depleted by the Group Indicator (minimum of the Water (A1) Water Table (A2) Ation (A3) Marks (B1) Hent Deposits (B2) Heposits (B3) Mat or Crust (B4) Heposits (B5) Heposits	tions along rs: of one requi	red; check	all that	salt Crust (B11) Aquatic Invertebric Hydrogen Sulfide Dry Season Wate Oxidized Rhizosp (where not tilled Presence of Redu Thin Muck Surface	ates (B13) Odor (C1) er Table (C2) cheres along Liv) uced Iron (C4)		Secon	dary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots ((where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
pth (Inche marks: duced soi duced soi duced soi diand Hyd mary India Surfac High V Satura Water Sedim Drift D Algal I Iron D Inunda Wate	Is with Gley depleted by the Group Indicator (minimum of the Water (A1) Water Table (A2) Ation (A3) Marks (B1) Hent Deposits (B2) Heposits (B3) Mat or Crust (B4) Heposits (B5) Heposits	tions along rs: of one requi	red; check	all that	salt Crust (B11) Aquatic Invertebric Hydrogen Sulfide Dry Season Wate Oxidized Rhizosp (where not tilled Presence of Redu Thin Muck Surface	ates (B13) Odor (C1) er Table (C2) sheres along Liv) uced Iron (C4) ee (C7) Remarks)		Secon	dary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots ((where tilled)) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
peth (Inche marks: duced soi duced s	is with Gley depleted of GY drology Indicators (minimum of the Water (A1) Vater Table (A2) ation (A3) Marks (B1) Marks (B1) Ment Deposits (B2) Peposits (B3) Mat or Crust (B4) Peposits (B5) ation Visible on A r-Stained Leave vations: er Present?	rs: of one requi	red; check	all that	sapply) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Dry Season Wate Oxidized Rhizosp (where not tilled Presence of Redu Thin Muck Surfac Other (Explain in	ates (B13) Odor (C1) or Table (C2) oheres along Liv) uced Iron (C4) oe (C7) Remarks)		Secon	dary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots ((where tilled)) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
pe: ppth (Inche marks: duced soi /DROLO etland Hyd mary Indic Surfac High V Satura Water Sedim Drift D Inunda Wate Iron D Inunda Water tater Table turation Procudes cap	Is with Gley depleted by the cators (minimum of cators (B3)) Marks (B1) Marks (B1) Marks (B3) Marks (B3) Marks (B3) Marks (B3) Marks (B5) Marks (B5) And or Crust (B4) Peposits (B5) An	rs: of one requires (B9) Yes Yes Yes	red; check y (B7) I No I No	call that	sapply) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Dry Season Wate Oxidized Rhizosp (where not tilled Presence of Redu Thin Muck Surfac Other (Explain in Depth (Inche Depth (Inche	ates (B13) Odor (C1) er Table (C2) wheres along Liv) uced Iron (C4) ee (C7) Remarks) s): 1 s): 0 s): 0	ving Roots (C3	Secon	dary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots ((where tilled)) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
pe: ppth (Inche marks: duced soi /DROLO etland Hyd mary Indic Surfac High V Satura Water Sedim Drift D Inunda Wate Iron D Inunda Water tater Table turation Procudes cap	Is with Gley depleted by the cators (minimum of cators (B3)) Marks (B1) Marks (B1) Marks (B3) Marks (B3) Marks (B3) Marks (B3) Marks (B5) Marks (B5) And or Crust (B4) Peposits (B5) An	rs: of one requires (B9) Yes Yes Yes	red; check y (B7) I No I No	call that	sapply) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Dry Season Wate Oxidized Rhizosp (where not tilled Presence of Redi Thin Muck Surfac Other (Explain in Depth (inche	ates (B13) Odor (C1) er Table (C2) wheres along Liv) uced Iron (C4) ee (C7) Remarks) s): 1 s): 0 s): 0	ving Roots (C3	Secon	dary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots ((where tilled)) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
pe: epth (Inche emarks: duced soi //DROLO etland Hyd imary Indic Surfac High V Satura Water Sedim Drift D Algal I Iron.D Inunda Wate eld Observiface Wate after Table tituration Pr cludes cap	Is with Gley depleted by the cators (minimum of cators (B3)) Marks (B1) Marks (B1) Marks (B3) Marks (B3) Marks (B3) Marks (B3) Marks (B5) Marks (B5) And or Crust (B4) Peposits (B5) An	rs: of one requires (B9) Yes Yes Yes	red; check y (B7) I No I No	call that	sapply) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Dry Season Wate Oxidized Rhizosp (where not tilled Presence of Redu Thin Muck Surfac Other (Explain in Depth (Inche Depth (Inche	ates (B13) Odor (C1) er Table (C2) wheres along Liv) uced Iron (C4) ee (C7) Remarks) s): 1 s): 0 s): 0	ving Roots (C3	Secon	dary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots ((where tilled)) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Project Site: Williston Village RV Resort				City/Co	unty: <u>Willian</u>	<u>ns</u> Sa	ampling Date:	<u>5/9/13</u>		
Applicant/Owner: Carlson McCain					State:	<u>ND</u> Sa	ampling Point:	<u>1u2</u>		
Investigator(s): Greg Meyer				Section	, Township, Range:	24-T155N-R	<u>101W</u>			
Landform (hillslope, terrace, etc.): toeslope			Local	l relief (conc	ave, convex, none):	convex	;	Slope (%)	: <u>1</u>	
Subregion (LRR): F Lat: 48.2370	090N			Long: <u>-1</u>	03.608145W	Da	tum: NAD 8	3		
Soil Map Unit Name: 2270 - Harriet and Stirum Soils	0-2% slopes					NWI classific	cation: <u>none</u>			
Are climatic / hydrologic conditions on the site typical for	this time of y	/ear? `	Yes	⊠ No I	(If no, explain i	in Remarks.)				
Are Vegetation , Soil , or Hydrology	, significa	antly dis	turbed	? Are "	Normal Circumstant	ces" present?	Yes 🛛	No []	
Are Vegetation □, Soil □, or Hydrology	□, naturali	ly proble	matic?	' (İf ne	eded, explain any a	nswers in Rema	ırks.)			
CURRENT A DV OF FINDINGS. Associate and other				lil	Avenesate lenne	utant fasi				
SUMMARY OF FINDINGS – Attach site map st				locations,	, transects, impo	rtant reatures	s, etc.			
Hydrophytic Vegetation Present?	Yes ⊠	No								
Hydric Soil Present?	Yes □	No								
Wetland Hydrology Present?	Yes 🛛	No		Is the Samp	pling Area within a	Wetland? Y	es 🗌	No	×	
Remarks:	-4!									
Nearly barren of vegetation due to high salt at base	of toeslope.						,			
VEGETATION – Use scientific names of plants	s									
Tree Stratum (Plot Size:)	Absolute	Domin		Indicator	Dominance Test	Worksheet:		,		
1	% Cover	Specie	8:	Status	Number of Domin	ant Charles				
2.		-			That Are OBL, FA		(/	A)		
3.					Total Number of I	Cominant				
4.					Species Across A		(6	3)		
•		= Tota	l Cover	r	Percent of Domin	ant Species	,			
Sapling/Shrub Stratum (Plot Size:)					That Are OBL, FA	CW, or FAC:	(/	VB)		
1					Prevalence Inde	x worksheet:				
2					Total % Co	over of:	Multiply by:			
3 4					OBL species		.x1 =			
4					FACW species		x2 =			
5					FAC species		x3 =			
		= Tota	I Cover	r	FACU species		x4 =			
Herb Stratum (Plot Size: 5tt)					UPL species		x5 =	_		
1. <u>Distchlis spicata</u>	<u>20</u>	<u>yes</u>		<u>FACW</u>	Column Totals:		(A)	(B	i)	
2. Puccinellia nuttaliana	<u>10</u>	yes		<u>OBL</u>		Prevalence Inc	dex = B/A =			
3:					Hydrophytic Veg	jetation Indicat	ors:			
4					<u>x</u> 1 – Ra	apid Test for Hyd	drophytic Vege	tation		
5					2 - Do	minance Test is	>50%			
6					3 – Pr	revalence index	is ≤3.0¹			
7					4 - Mc	orphological Ada	otations1 (Prov	ride supp	ortin a d	ata in
8				·		emarks or on a			•	
9					Proble	ematic Hydrophy	tic Vegetation	(Explain)	
10					Indicators of hyd	ric soil and wetla	and hydrology	must be p	resent,	
	<u>30</u>	= Tota	I Cover	r	unless disturbed	or problematic.				
Woody Vine Stratum (Plot Size:)										
1					i.					
2		_								
		= Tota	l Cover	ī				_		_
% Bare Ground in Herb Stratum 70					Hydrophytic Veg	jetation Presen	t? Yes	⊠	No	
Remarks:									٠.	
ļ .										

SOIL											Samplin	g Point: 1	u2		
Profile Desc	ription: (Descrit	e to the	depth n	eeded	to docu	ment the indicator	or confirm the	absence d	of indicato	rs.)					
Depth	Mat	rix				Redox Fe									
(inches)	Color (moist)		%	Co	lor (Mois	st) <u>%</u>	Type ¹	Loc²	1	exture	<u> </u>	Re	marks		
0-26	10YR 3/2	1	100						_	<u>sicl</u>					
<u>26-30+</u>	2.5Y 3/3	1	100						_	sicl					
									_		·				
		_							-		·				
		_							.		• —				
									_						
		-							_						
		•							_						
Type: C= Co	oncentration, D=	Depletion	ı, RM=F	Reduce	ed Matrix	, CS=Covered or C	Coated Sand G	irains. ² L	ocation: F	L=Pore	Lining, M=Mat	ix			
ydric Soil I	ndicators: (App	licable to	all LR	Rs, unl	ess othe	rwise noted.)				Indic	ators for Proble	matic Hy	dric Soll	в ³ :	
] Histoso	ol (A1)					Sandy Gleyed Mat	rix (S4)				1 cm Muck (A) (LRR I,	J)		
] Histic E	pipedon (A2)					Sandy Redox (S5)					Coast Prairie I	Redox (A1	6) (LRR	F, G, H))
] Black H	Histic (A3)					Stripped Matrix (St	6)				Dark Surface (S7) (LRR	G)		
] Hydrog	jen Sulfide (A4)					Loamy Mucky Min	eral (F1)				High Plains De	pressions	(F16)		
] Stratifie	ed Layers (A5) (I	LRR F)				Loamy Gleyed Ma	trix (F2)				(LRR H outs	ide of Mi	.RA 72 &	73)	
1 cm M	luck (A9) (LRR I	F, G, H)				Depleted Matrix (F	3)				Reduced Verti	c (F18)			
_	ed Below Dark S		A11)			Redox Dark Surface	ce (F6)				Red Parent Ma	aterial (TF	2)		
_	Dark Surface (A1		•			Depleted Dark Sur					Very Shallow I		-	2)	
] Sandy	Mucky Mineral (S1)				Redox Depression	s (F8)				Other (Explain				
2.5 CN	Mucky Peat or	Peat (S2)(LRR (3, H)		High Plains Depre	ssions (F16)				ators of hydroph				t
] 5 cm M	lucky Peat or Pe	at (S3) (I	LRR F)			(MLRA 72 & 73 c	of LRR H)				logy must be pro ematic.	esent, unic	ess distun	oed or	
estrictive L	ayer (if present	t):					-								
ype:															
epth (Inche	s):									Hvdri	c Solis Present	? Yes		No	Σ
Remarks:															
lon-hydric si	oils above old ox	bow / me	eander	channe	el.										
				_							-				
YDROLO	GY														
etland Hyd	Irology Indicate	rs:				<u></u>									
rimary Indic	ators (minimum	of one re	quired;	check	all that a	apply)				Second	lary Indicators (2	or more	required)		
Surfac	e Water (A1)		·		Ø	Salt Crust (B11)				□ s	urface Soil Crac	ks (B6)			
	Vater Table (A2)					Aquatic Invertebra	tes (B13)			_	parsely Vegetat	ed Conca	e Surfac	e (B8)	
_	tion (A3)					Hydrogen Sulfide (rainage Pattern				
	Marks (B1)					Dry Season Water					xidized Rhizosp		na Livina	Roots ((C3)
	ent Deposits (B2	p)			_	Oxidized Rhizosph		ina Roots			(where tilled)		.9 =9	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	50,
_	ent Deposits (B3)	-,				(where not tilled)	_	ing Hools		_	rayfish Burrows	(CB)			
	• •				-	,				_	=		lmanan	(CD)	
	Mat or Crust (B4))				Presence of Redu	• •				aturation Visible		imagery	(09)	
	eposits (B5)					Thin Muck Surface					eomorphic Posi				
	tion Visible on A			(7)		Other (Explain in F	temarks)				AC-Neutral Tes			_	
	-Stained Leav	es (B9)						·····		□ F	rost-Heave Hun	IMOCKS (L	7) (LHH	<u>r) </u>	
ield Observ	ations:							1							
urface Wate	er Present?	Yes		No	×	Depth (inches):	ŀ							
ater Table	Present?	Yes	\boxtimes	No		Depth (inches): 25								
aturation Pr		Yes	×	No	. 🗖	Depth (inches): 21		Wetland	Hydro	logy Present?	Yes	×	No	
	illary fringe)							if over!!s!	blo:						
sscribe He	LUIDEO DATA (ST	earn gau	ye, moi	исиид	ı well, ae	erial photos, previou	us (rispections)	, ıı avallal	uie.						
lemarks:															

Project Site: Williston Village RV Resort			City/Co	unty: Williams Sampling Date: 5/9/13
Applicant/Owner: <u>Carlson McCain</u>				State: ND Sampling Point: 1w3
Investigator(s): <u>Greg Meyer</u>			Section	, Township, Range: <u>24-T155N-R101W</u>
Landform (hillslope, terrace, etc.): <u>drainageway</u>		Loca	al relief (conc	ave, convex, none): concave Slope (%): <1
Subregion (LRR): E Lat: 48.236			Long: <u>-1</u>	03.611346W Datum: NAD 83
Soil Map Unit Name: 2270 - Harriet and Stirum Soils				NWI classification: none
Are climatic / hydrologic conditions on the site typical for		-		(If no, explain in Remarks.)
		cantly disturbed		Normal Circumstances" present? Yes 🛛 No 🗌
Are Vegetation .□, Soil □, or Hydrology	·□, natura	lly problematic	? (mne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sl	nowing sa	mpling point	locations,	, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes 🛚	No □		
Hydric Soil Present?	Yes 🗵	No 🗆		
Wetland Hydrology Present?	Yes 🛭	1 No 🗆	is the Samp	oling Area within a Wetland? Yes 🗵 No 🗌
Remarks:				
Old oxbow / meander channel adjacent to Camp Cre	ek. Fill pusi	hed into part o	of the oxbow	r channel.
VEGETATION - Use scientific names of plant	 s			
Tree Stratum (Plot Size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1				Number of Dominant Species 3 (A)
2				That Are OBL, FACW, or FAC: 3 (A)
3. <u> </u>				Total Number of Dominant Species Across All Strate: 3 (B)
4				Species Across All Strata:
		= Total Cove	r	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot Size:)				-
1				Prevalence Index worksheet:
2 3		. —		Total % Cover of:
4.				FACW species x2 =
5				FAC species x3 =
		= Total Cove	<u></u>	FACU species x4 =
Herb Stratum (Plot Size: 5ft)		- 10.0.0010		UPL species
 -	40		FACIAL	(1)
1. Juncus longistylis	<u>40</u>	yes	FACW	Column Totals: (A) (B)
Carex praegracilis Distichlis spicata	<u>20</u>	yes	FACW	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
Distichlis spicata Agropyron canlum	<u>40</u>	<u>yes</u>	<u>FACW</u> FACU	1 – Rapid Test for Hydrophytic Vegetation
5	10	<u>no</u>	1700	2 - Dominance Test is >50%
6				
7.				3 – Prevalence Index is ≤3.0¹
8				4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation ¹ (Explain)
10				Indicators of hydric soil and wetland hydrology must be present.
	<u>110</u>	= Total Cove	r	unless disturbed or problematic.
Woody Vine Stratum (Plot Size:)				
t				
2				
		= Total Cove	er	
% Bare Ground in Herb Stratum Q				Hydrophytic Vegetation Present? Yes ⊠ No □
Remarks:				

Profile Des	cription: (Describ	e to the death	needed to	docume	ent the indicator o	r confirm the	absence of	f indicator	's:)	Sampling Point: 1w3
Depth	Mati	•	100000	20001110	Redox Fea		20001100 01	i iiiologioi	0.,	
(inches)	Color (moist)	%	Color	(Moist)		Type ¹	Loc2	— _т	exture	Remarks
0-4	10YR 3/1	100		(1410101)				- <u>-</u> -	sicl	Tronigno
4-10	2.5Y 4/1	<u>100</u> <u>85</u>	107		<u>15</u>	<u>c</u>	m	•	sici	
10-26+	2.5Y 4/2	<u>70</u>		3 4/4	<u>20</u>	<u>c</u>	m		sici	-
10.201	2.01 7/2	78		R 4/4	<u>10</u>	<u>c</u>	m m		sici	
			7.0.1	<u> </u>	15	¥			<u> unu</u>	
								-		
							-	-		
—								•		
¹Type: C~ C	oncentration D=0	Pentetion RM-	 Reduced I		 CS=Covered or C	nated Sand (Grains ² l c	- ocation: P	l =Por	e Lining, M=Matrix
	Indicators: (Appl					outou outio (J, 41110. CC	30411011111		ators for Problematic Hydric Soils ³ :
1	ol (A1)				andy Gleyed Matr	ix (S4)				1 cm Muck (A9) (LRR I, J)
1	Epipedon (A2)				andy Redox (S5)	(0-1)				Coast Prairie Redox (A16) (LRR F, G, H)
l	Histic (A3)			_	tripped Matrix (S6					Dark Surface (S7) (LRR G)
I	gen Sulfide (A4)			_	oamy Mucky Mine	•				High Plains Depressions (F16)
	ied Layers (A5) (L	RR F\			pamy Gleyed Mat					(LRR H outside of MLRA 72 & 73)
1 =	Muck (A9) (LRR F	• •		<u>. </u>	epleted Matrix (F3	• •				Reduced Vertic (F18)
	ted Below Dark Si				edox Dark Surfac	•				Red Parent Material (TF2)
1 `	Dark Surface (A1				epleted Dark Surf					Very Shallow Dark Surface (TF 12)
l	Mucky Mineral (S	-			edox Depressions					Other (Explain in Remarks)
1 `	Mucky Peat or F				igh Plains Depres					ators of hydrophytic vegetation and wetland
1	Mucky Peat or Pe			(MLRA 72 & 73 o	f LRR H)				ology must be present, unless disturbed or ematic.
Restrictive	Layer (if present):							P	
Туре:										
Depth (Inche	es):								Hydr	ic Soils Present? Yes 🖾 No 🗆
Remarks:					•					
Hydric soils	within old oxbow/	meander chan	nel of drai	nagewa	ay (Camp Creek).					
	•									•
HYDROLO	GY									
	drology Indicato	rs:								
Primary India	cators (minimum o	of one required;	check all	that ap	ply)			;	Second	dary Indicators (2 or more required)
⊠ Surfac	ce Water (A1)		D	Sa Sa	alt Crust (B11)		·		<u> </u>	Surface Soil Cracks (B6)
⊠ High \	Nater Table (A2)] Ac	quatic Invertebrat	es (B13)		(□ s	Sparsely Vegetated Concave Surface (B8)
☑ Satura	ation (A3)] H ₃	ydrogen Sulfide C	dor (C1)		1		Orainage Patterns (B10)
☐ Water	Marks (B1)		Ε] Dr	ry Season Water	Table (C2)		l		Oxidized Rhizospheres along Living Roots (C3)
☐ Sedim	nent Deposits (B2))	0) O	xidized Rhizosphe	eres along Liv	ving Roots ((C3)		(where tilled)
☑ Drift D	Peposits (B3)			(w	vhere not tilled)			1		Crayfish Burrows (C8)
☐ Algai	Mat or Crust (B4)] Pr	resence of Reduc	ed Iron (C4)		ļ	3 8	Saturation Visible on Aerial Imagery (C9)
☐ Iron D	eposits (B5)		[] Th	nin Muck Surface	(C7)		i	X 0	Geomorphic Position (D2)
☐ Inunda	ation Visible on A	erial Imagery (E	37) [] (01	ther (Explain in R	emarks)		1	XI F	AC-Neutral Test (D5)
☐ Wate	r-Stained Leave	es (B9)						1	□ F	rost-Heave Hummocks (D7) (LRR F)
Field Obser	vations:									
Surface Wat	er Present?	Yes 🛛	No	_	Depth (inches)	2	İ			
Water Table	Present?	Yes 🗵	No I	_	Depth (inches)	: 0				
Saturation P	resent?	Van 157	No. I	_	Donth (inches)			Wetland	Hydro	ology Present? Yes 🗵 No 🗌
(includes car	oillary fringe)	Yes 🔯	No I	<u> </u>	Depth (inches)	: 0 		***************************************	,	mogy resent. Tes 23 No []
Describe Re	ecorded Data (stre	eam gauge, mo	nitoring w	ell, aeria	al photos, previou	s inspections), if availabl	le:		
Remarks:										
I	-									

Project Site: Williston Village RV Resort		-	City/Co	unty: <u>Williams</u> Sampling Date: <u>5/9/13</u>
Applicant/Owner: Carlson McCain				State: ND Sampling Point: 1u3
Investigator(s): Greg Meyer			Section	, Township, Range: <u>24-T155N-R101W</u>
Landform (hillslope, terrace, etc.): toeslope		Loca	al relief (conc	ave, convex, none): convex Slope (%): 1
Subregion (LRR): <u>F</u> Lat: <u>48.236</u>	<u>525N</u>		Long: <u>-1</u>	03.611380W Datum: NAD 83
Soil Map Unit Name: 2270 - Harriet and Stirum Soils	0-2% slopes			NWI classification: none
Are climatic / hydrologic conditions on the site typical for	this time of y	ear? Yes	⊠ No I	(If no, explain in Remarks.)
Are Vegetation □, Soil □, or Hydrology		-		Normal Circumstances" present? Yes 🛛 No 🗌
Are Vegetation □, Soil □, or Hydrology	, natural	y problematic	? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sl	 _		t locations,	transects, important features, etc.
Hydrophytic Vegetation Present?	Yes 🗌	No 🗵		
Hydric Soil Present?	Yes 🗆	No ⊠		
Wetland Hydrology Present?	Yes 🖾	No 🗆	is the Samp	oling Area within a Wetland? Yes 🗌 No 🛛
Remarks:				
Toeslope with water and saltcrust nearby.				
VECETATION Line exigntific names of plant				
VEGETATION – Use scientific names of plants Tree Stratum (Plot Size:)	Absolute	Dominant	Indicator	Dominance Test Worksheet:
· ,	% Cover	Species?	<u>Status</u>	
1 2				Number of Dominant Species That Are OBL, FACW, or FAC: (A)
3				
4.				Total Number of Dominant Species Across All Strata: (B)
		= Total Cove		Percent of Dominant Species
Sapling/Shrub Stratum (Plot Size:)	_			That Are OBL, FACW, or FAC:
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species x1 =
4				FACW species x2 =
5				FAC species x3 =
		= Total Cove	er	FACU species x4 =
Herb Stratum (Plot Size: 5ft)				UPL species x5 =
1. Agropyron canium	<u>40</u>	<u>yes</u>	<u>UPL</u>	Column Totals: (A) (B)
2. <u>Achillea millefolium</u>	<u>5</u>	no	FACU	Prevalence Index = B/A =
3. <u>Cirsium flodmanii</u>	<u>10</u>	<u>no</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:
4. Poa pratensis	<u>30</u>	<u>yes</u>	<u>FACU</u>	1 - Rapid Test for Hydrophytic Vegetation
5. <u>Symphyotrichum ericoldes</u>	10	<u>no</u>	<u>FACU</u>	2 - Dominance Test is >50%
6				3 – Prevalence Index is ≤3.01
7				4 - Morphological Adaptations ¹ (Provide supporting data in
8				Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation [†] (Explain)
10				Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
M. A. Mines Oberts (Dr. 1991)	<u>95</u>	= Total Cove	er.	uniess disturbed of prodematic.
Woody Vine Stratum (Plot Size:)				
1			—	
2		Tatal Caus		
9/ Bara Cround in Nach Chapture 5		= Total Cove	er	Hydrophytic Vegetation Present? Yes ☐ No ☒
% Bare Ground in Herb Stratum 5				Hydrophytic Vegetation Present? Yes No No
Remarks:				
•				

SUIL									Sampling Point: 1u3
	•		epth need	ed to dod	cument the indicato		absence of ir	ndicators.)	
Depth	• Matr					eatures			
(inches)	Color (moist)			Color (Mo	oist) %	Type'	Loc²	Textur	
0-5	2.5Y 3/1	<u>10</u>	_					<u>ci</u>	
<u>5-15</u>	2,5Y 4/3	<u>10</u>	_					<u>다</u>	
15-18	2.5Y 4/3	10	_					<u>ls</u>	sandy layer
18-27+	2.5Y 4/3	10	Q					1	
			-					_	
						-		. —	-
		•	_						
1			_				2)		
						Coated Sand G	irains. Loca		re Lining, M=Matrix
l	ndicators: (Appli	icable to a	III LHHS, U		•	-A-i (O.4)		_	cators for Problematic Hydric Soils ³ :
Histoso					Sandy Gleyed M				1 cm Muck (A9) (LRR I, J)
1	Epipedon (A2)				Sandy Redox (St	•			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)				Stripped Matrix (•			Dark Surface (S7) (LRR G)
1 .	en Sulfide (A4)				Loamy Mucky Mi				High Plains Depressions (F16)
	ed Layers (A5) (L	•			Loamy Gleyed M			-	(LRR H outside of MLRA 72 & 73)
1	luck (A9) (LRR F				Depleted Matrix (Reduced Vertic (F18)
1	ed Below Dark Su	•	1)		Redox Dark Surfa		•		Red Parent Material (TF2)
1 =	Dark Surface (A12	•			Depleted Dark St				Very Shallow Dark Surface (TF 12)
I	Mucky Mineral (S				Redox Depressio			□ ³Indi	Other (Explain in Remarks) icators of hydrophytic vegetation and wetland
	Mucky Peat or P		-		High Plains Depr			hydi	rology must be present, unless disturbed or
	lucky Peat or Pea		(R F)		(MLRA 72 & 73	of LRR H)		prot	plematic.
ł .	.ayer (if present)) .						ĺ	
Type:									
Depth (Inches	s):							Hyd	ric Soils Present? Yes 🔲 No 🗵
Remarks:									
Non-hydric⋅sc	oils above old oxt	ow / mea	nder chan	nel.					
									
HYDROLOG	GY .								
Wetland Hyd	irology Indicator	s:							
Primary Indica	ators (minimum o	f one requ	uired; ched	k all tha	t apply)			Secor	ndary Indicators (2 or more required)
Surface	e Water (A1)			X	Salt Crust (B11)				Surface Soil Cracks (B6)
⊠ High W	/ater Table (A2)				Aquatic Invertebr	ates (B13)			Sparsely Vegetated Concave Surface (B8)
☑ Saturat	tion (A3)				Hydrogen Sulfide	Odor (C1)			Drainage Pattems (B10)
☐ Water	Marks (B1)				Dry Season Wate	er Table (C2)			Oxidized Rhizospheres along Living Roots (C3)
☐ Sedime	ent Deposits (B2)				Oxidized Rhizosp	heres along Liv	ing Roots (C	3)	(where tilled)
☐ Drift De	eposits (B3)				(where not tilled)			Crayfish Burrows (C8)
☐ Algai M	Mat or Crust (B4)				Presence of Redu	uced Iron (C4)			Saturation Visible on Aerial Imagery (C9)
☐ Iron De	eposits (B5)				Thin Muck Surfac	æ (C7)			Geomorphic Position (D2)
☐ Inunda	tion Visible on Ae	rial Image	ery (B7)		Other (Explain in	Remarks)			FAC-Neutral Test (D5)
☐ Water	-Stained Leave	s (B9)							Frost-Heave Hummocks (D7) (LRR F)
Field Observ	ations:	<u></u>							
Surface Wate		Yes	□ No	×	Depth (inche	s):			
Water Table F			☑ !¹º		Depth (inche	•			
Saturation Pre						•			
(includes capi		Yes	⊠ No		Depth (inche	s): 8		etland Hydr	ology Present? Yes 🗵 No 🗌
Describe Rec	corded Data (stre	am gauge	, monitori	ng well, a	aerial photos, previo	ous inspections)	, if available:		
							•		
Remarks:							······································	· · · · · · · · · · · · · · · · · · ·	
									•
						•			

Project Site: Williston Village RV Resort			City/Cou	inty: <u>Williams</u> Sampling Date: <u>5/9/13</u>
Applicant/Owner: <u>Carlson McCain</u>				State: ND Sampling Point: 1u4
Investigator(s): Greg Meyer			Section,	Township, Range: 24-T155N-R101W ,
Landform (hillslope, terrace, etc.): sideslope		Local	relief (conca	ave, convex, none): convex Slope (%): 1
Subregion (LRR): <u>F</u> Lat: <u>48.236</u> :	923N		Long: <u>-1</u>	03.609927W Datum: NAD 83
Soil Map Unit Name: 2270 - Harriet and Stirum Soils				NWI classification: none
Are climatic / hydrologic conditions on the site typical for	-			I (If no, explain in Remarks.)
		antly disturbed		Normal Circumstances" present? Yes 🗵 No 🗌
Are Vegetation □, Soil □, or Hydrology	, naturali	y problematic?	(If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh			locations,	transects, important features, etc.
Hydrophytic Vegetation Present?	Yes 🔲	No ⊠		
Hydric Soil Present?	Yes 🗆	No ⊠		
Wetland Hydrology Present?	Yes 🗌	No ⊠	is the Samp	iling Area within a Wetland? Yes 🗌 No 🔯
Remarks:				
Side-slope above impacted wetland area.				
VEGETATION – Use scientific names of plants				
Tree Stratum (Plot Size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1				Number of Dominant Species That Are ORL FACW or FAC: (A)
2				That Are OBL, FACW, or FAC: (^)
3				Total Number of Dominant
4				Species Across All Strata:
		= Total Cover	•	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot Size:)				
t				Prevalence Index worksheet: Total % Cover of: Multiply by:
2 3				OBL species x1 =
4				FACW species x2 =
5.				FAC species x3 =
		= Total Cover	•	FACU species x4 =
Herb Stratum (Plot Size: 5ft)				UPL species x5 =
1. Poa pratensis	<u>85</u>	ves	FACU	Column Totals: (A) (B)
2. Pascopyrum smithii	<u>15</u>	no	FACU	Prevalence Index = B/A =
3	15			Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 – Prevalence Index is ≤3.0¹
7				4 - Morphological Adaptations (Provide supporting data in
8				Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation ¹ (Explain)
10				Indicators of hydric soil and wetland hydrology must be present,
	<u>100</u>	= Total Cover	•	unless disturbed or problematic.
Woody Vine Stratum (Plot Size:)				
1				
2				
of Burn Oursellin Hart Observer 0		= Total Cover	ſ	Hydrophytic Vegetation Present? Yes □ No ☑
% Bare Ground in Herb Stratum 0				nydropnytic vegetation Present? Tes No
Remarks:				
•				

Depth	Matrix	•			Redox Fe	atures			
(inches)	Color (moist)	%	Cole	or (Mois	st) %	Type ¹	Loc ²	- Texture	e Remarks
0-4	10YR 3/2	100			<u> </u>			1	
<u>4-16</u>	10YR 3/3	100						. [
16-26+	10YR 4/3	100						- 1	
			_					-	
			_						
			~						
			-				•		
	, —		-						
Tyne: C- Con	· —— centration D⇒De	enletion RM	 Beduce:	d Matrix	, CS=Covered or C	oated Sand G	irains ² l ocat	ion: Pl =:Po	re Lining, M=Matrix
	dicators: (Applic								cators for Problematic Hydric Solis ³ :
Histosol		aoio to aii L	11110, 01110		Sandy Gleyed Mat	rix (S4)			1 cm Muck (A9) (LRR I, J)
	oipedon (A2)				Sandy Redox (S5)				Coast Prairie Redox (A16) (LRR F, G, H)
									Dark Surface (S7) (LRR G)
Black His					Stripped Matrix (St				
	n Sulfide (A4)	10 E/			Loamy Mucky Mine				High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
_	i Layers (A5) (LF				Loamy Gleyed Mat			_	
	ick (A9) (LRR F,				Depleted Matrix (F	-			Reduced Vertic (F18)
	d Below Dark Sui	-			Redox Dark Surfac				Red Parent Material (TF2)
	ark Surface (A12)				Depleted Dark Sur				Very Shallow Dark Surface (TF 12)
=	lucky Mineral (S1		O H1		Redox Depression				Other (Explain in Remarks) cators of hydrophytic vegetation and wetland
	Mucky Peat or Pe			ب	High Plains Depres			hydn	ology must be present, unless disturbed or
I Sem wu	icky Peat or Peat		r)		(MLRA 72 & 73 c	ii Lini, n)		prob	lematic.
	war /lf propositio								
Restrictive La	yer (If present):				<.				•
lestrictive La ype: Pepth (Inches) Remarks:			er channel	ı.	V.			Hyd	ric Soils Present? Yes 🔲 No
Restrictive La Type: Depth (Inches) Remarks:):		er channel	l.	<u>.</u>			Hydi	ric Soils Present? Yes 🔲 No
Restrictive La Type: Depth (Inches) Remarks: Non-hydric soil	ls above old oxbo		er channel	l. 				Hydi	ric Soils Present? Yes 🔲 No
Restrictive La ype: Depth (Inches) Remarks: Jon-hydric soil	ls above old oxbo	ow / meande	er channel	i.				Hyd	ric Soils Present? Yes 🔲 No
Restrictive La Type: Depth (Inches) Remarks: Non-hydric soil HYDROLOG Vetland Hydr): Is above old oxbo	ow / meande			apply)				ric Soils Present? Yes No
lestrictive La ype: pepth (Inches) demarks: don-hydric soil HYDROLOG Vetland Hydr rimary Indicat	is above old oxbo	ow / meande		all that a	apply) Salt Crust (B11)			Secon	
lestrictive La lype: lepth (Inches) lemarks: lon-hydric soil lyppROLOG lettand Hydridinary Indicat Surface	ls above old oxbo Y ology Indicators tors (minimum of	ow / meande		all that a		:es (B13)		Secon	ndary Indicators (2 or more required)
lestrictive La type: tepth (Inches) temarks: temarks: temarks: temarks: typeOLOG vetland Hydr trimary Indicat Surface High Wa	Is above old oxbooking abo	ow / meande		all that a	Salt Crust (B11)	, ,		Secon	ndary Indicators (2 or more required) Surface Soil Cracks (B6)
lestrictive La ype: Depth (Inches) Demarks: Don-hydric soil HYDROLOG Vetland Hydr Trimary Indicat Surface High Wa Saturation	Is above old oxbooking abo	ow / meande		all that a	Salt Crust (B11) Aquatic Invertebrat	Odor (C1)		Secon	ndary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8)
Restrictive La ype: Depth (Inches) Remarks: Jon-hydric soil HYDROLOG Wetland Hydr Primary Indicat Surface High Wa Saturati	is above old oxbooking in the state of the s	ow / meande		all that a	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide (Odor (C1) Table (C2)	ing Roots (C3	Secon	ndary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10)
Pestrictive La Type: Depth (Inches)	is above old oxbooding indicators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) int Deposits (B2)	ow / meande		all that a	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide (Dry Season Water Oxidized Rhizosph	Odor (C1) Table (C2)	ing Roots (C3	Secon	ndary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots (C
Restrictive La ype: Depth (Inches) Remarks: Jon-hydric soil HYDROLOG Vetland Hydr Primary Indicat Surface High Water M Sedimen Drift Dep	Is above old oxbooding in the control of the contro	ow / meande		all that a	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide (Dry Season Water Oxidized Rhizosph (where not tilled)	Odor (C1) Table (C2) eres along Liv	ing Roots (C3	Secon	ndary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots (C (where tilled) Crayfish Burrows (C8)
Restrictive La Type: Depth (Inches) Remarks: Non-hydric soil HYDROLOG Wetland Hydr Surface High Wet Saturatio Sedimen Drift Dep Algal Me	Is above old oxbooding in the control of the control of the control of the control of the control on (A3) and (B1) on (B2) posits (B2) posits (B3) at or Crust (B4)	ow / meande		all that a	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide (Dry Season Water Oxidized Rhizosph (where not tilled) Presence of Reduc	Odor (C1) Table (C2) eres along Lived Iron (C4)	ing Roots (C3	Secon	ndary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Restrictive La Type: Depth (Inches) Remarks: Non-hydric soil HYDROLOG Wetland Hydr Primary Indicat Surface High Water M Sedimer Drift Dep Algal Ma	Is above old oxbooking of the control of the contro	ow / meande	d; check a	all that a	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide C Dry Season Water Oxidized Rhizosph (where not tilled) Presence of Reduc Thin Muck Surface	Odor (C1) Table (C2) eres along Liv eed Iron (C4) (C7)	ing Roots (C3	Secon	ndary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Restrictive La Type: Depth (Inches) Remarks: Jon-hydric soil RYDROLOG Retland Hydr Primary Indicat Surface High Wa Saturati Water M Sedimer Drift Dep Algal Ma Iron Dep	Is above old oxbooking of the control of the contro	ow / meande	d; check a	all that a	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide (Dry Season Water Oxidized Rhizosph (where not tilled) Presence of Reduc	Odor (C1) Table (C2) eres along Liv eed Iron (C4) (C7)	ing Roots (C3	Secon	ndary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive La Type: Depth (Inches) Remarks: Non-hydric soil HYDROLOG Wetland Hydr Primary Indicat Surface High Water N Sedimer Drift Dep Inon Dep Inundati	Is above old oxbooding in the control of the contro	ow / meande	d; check a	all that a	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide C Dry Season Water Oxidized Rhizosph (where not tilled) Presence of Reduc Thin Muck Surface	Odor (C1) Table (C2) eres along Liv eed Iron (C4) (C7)	ing Roots (C3	Secon	ndary Indicators (2 or more required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
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Appendix C

Project Area Photographs



Photograph 1. Photograph of Williston Village RV Resort fill materials up to wetland edge. The wetland is located within the floodplain of Camp Creek. The sediment fence is located along the wetland boundary. Photograph taken facing southeast.



Photograph 2. Photograph of impacted wetland. The wetland consists of a former oxbow / meander channel of Camp Creek. Approximately 4.5 acres of wetland have been impacted by the construction of the RV Resort. Photograph taken near-to observation point 1w2 and facing west.



Photograph 3. Photograph overlooking impacted wetland. Photograph taken facing north.